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FOREWORD

Nowadays growing instability of the socio-economic system is evident. Scholars of social sciences attempt to explain this by examining multiple, very diverse, reasons. Economists often refer to the debit crisis, long cycles, swelling resource prices; political scientists and economists – to the shifting centres of economic gravity; demographers – to changes in the demographic structure, sociologists – to the crisis of value system, etc.

All these explanations, however, seem to have a significant common drawback, which is the lack of a systematic view. One of the most viable hypotheses asserts that it is the political sub-system in the socio-economic system that lags behind in its development from the economic and technological subsystems in the hierarchy. We must be dealing with the system crisis, which is inevitably long-term and, as history shoes, can span multiple generations.

In conditions of growing instability entrepreneurs must find quick and insightful decision. We can identify two main approaches to dealing with this situation. The first option is to have a certain number of ready, previously tested, recipes that proved working well (e.g. financial management, fiscal regulation, personnel training). The second is to prepare entrepreneurs to be ready for spotting new opportunities and decisions in unexpected situations and uncertain environments. For successful implementation of these solutions substantial changes are necessary in business and enterprise education at the higher and lifelong learning levels. Education and training must be refocused towards development of creativity and other non-cognitive skills. Papers selected for the new issue of the 7th annual International Scientific Conference "Business and Uncertainty: Challenges for Emerging Markets" proceedings address both approaches with the first being prevalent.

Conference proceeding comprises studies presented at the 7th annual International Scientific Conference "Business and Uncertainty: Challenges for Emerging Markets" hosted by Riga international School of Economics and Business administration in April 2014. The conference attracted scientists from eleven countries (mostly Eastern and Northern European).

Head of the Editorial Board,
Professor Dr. Vulfs Kozlinskis

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YEARS OF UNCERTAINTY IN AUDIOVISUAL SECTOR IN LATVIA: 2009 – 2014

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Abstract

Purpose. Period from the end of 2008 until the first part of 2012 was the time of financial and economic crisis in Latvia. In the audiovisual sector of Latvia this period was characterized by significant cuts in public funding, industrial changes and was perceived as time of uncertainty. This paper examines the situation in the audiovisual sector of the last five years.

Methodology. Sectorial statistics, as well as information on public funding, produced films and other audiovisual media was analysed. Additionally, information about the institutional framework, education and governmental and non-governmental organizations of the sector was taken into account. Interviews were carried out with owners, managers and creative professionals of Latvian film studios and other audiovisual media enterprises and leaders of educational, governmental and non-governmental institutions. These interviews were conducted between 2010 and 2012 in order to obtain inside information on the sector and personal thoughts of managers and creative professionals that were active during different stages of this period. In order to summarise findings of conducted interviews, two focus group discussions involving different stakeholders of the sector were carried out.

Findings of this research show that significant and rapid decrease of public funding for the audiovisual sector during 2009 and 2010 was the cause for the crisis situation for many enterprises and for the sector overall. Several owners and managers were looking for other sources of income, while majority of enterprises were competing with each other for any available public funding. Such rivalry and the situation of uncertain future resulted in high tension among all stakeholders of the sector. That resulted in changes within the management of governmental and non-governmental institutions, as well as within television channels.

Keywords: audiovisual sector, public funding, Latvia, film studios

Paper classification: research paper

1. INTRODUCTION

During the period of 2013-2014 a significant change took place in the management of audiovisual sector in Latvia - both at the level the NGO and at the level of significant enterprises within the sector. These changes were a direct result of the period of uncertainty that lasted at least three years, and which began around 2009/2010 - the period of the most significant reduction of public funding particularly in the film and TV industries. The objective of this paper was to give an analysis of the situation in the audiovisual sector in the last five years. In addition, to determine the most significant problems of this period and their solutions and the actions of the parties involved, as well as the factors that have influenced them. Within the framework of the study, statistical data representing this period was used, as well as data from interviews conducted and the results of focus groups' discussions. The paper consists of four parts. In the first chapter an insight in the essence of audiovisual sector is given. The second chapter covers the methodology used in this study. The third chapter summarises statistical data on the last five years. The fourth chapter is dedicated to results of conducted interviews and focus groups' discussions.

2. AUDIOVISUAL SECTOR: A BRIEF OVERVIEW

The notion of the audiovisual sector is relatively new and therefore does not have a unified academic and political concept. Historically terms "film industry", "television industry" and other were used. Nevertheless, in the light of technological changes and development during the last decades these sectors have been merging. Currently the audiovisual sector at the level of European

Union is defined in the Regulation (EU) No. 1295/2013 of the European Parliament and of the Council. Based this Regulation the program Creative Europe 2014 –2020 was created. The regulation states that audiovisual sector includes films, television, video games and multimedia. However, documents of the previous planning period only included film industry, television and radio (Decision No. 1718/2006/EC).

Debande and Chetrit study includes film industry, broadcasting (television and radio), as well as video and multimedia sector within audiovisual industry (Debande & Chetrit 2001). European Audiovisual Observatory in their studies examines film, video and television sectors. The audiovisual sector must be examined in the context of concept of the creative and cultural industries. For example, the United Nations Conference on Trade and Development (UNCTAD) within its classification the audiovisual sector consists of the film sector, television, radio and other types of broadcasting, while the development of video games and multimedia is considered as belonging to the new media sector (United Nations Conference on Trade and Development 2010). For the purposes of cultural statistics analysis United Nations Educational, Scientific and Cultural Organization (UNESCO) Institute for Statistics uses their classification of cultural domains. There one of the domains is audiovisual and interactive media, which incorporates films, videos, television and radio (including on-line streaming), podcasts and video games (incl. on-line) (United Nations Development Programme & United Nations Educational, Scientific and Cultural Organization 2013).

To conclude audiovisual sector most often will consists of film and television industries, but depending on the level of integration, it can also include radio, computer games and multimedia industries.

Number of factors facilitated the integration of film and television industries. First, it was the large role of the state and private-owned television channels in the distribution of films - both globally and locally. Including policy that determines the percentage ratio for the screening of local and foreign films (Parker & Parenta 2008; Turok 2003). Television has always been a significant link in the value chain of film industry, especially in distribution. Second, the operation television facilitates the development of film industry, as in the case of RTL Goup in Cologne (Glassmann 2008; Mossig 2004) or BBC in Scotland (Turok 2003) or Manchester. TV channels occasionally make films themselves. Production of these often is more regular than film studio work, which is usually based in individual projects. Regional policy also facilitates integration, which provides development of both sectors, including development of joint support instruments and organisations (Tremblay & Cecilli 2009; Parker & Parenta 2008). The technological development also contributes towards the convergence of these sectors, incorporating development of multimedia and computer games in the audiovisual sector (Britton et al. 2009).

Internal and external links are vital in the development of audiovisual sector. Cooperation between top companies in the sector and other enterprises - both within and outside the sector - is often vital (Coe 2001; Krätke 2002; Kaiser & Liecke 2007). For a sector in the stage of development it is vital to cooperate with foreign markets, as it was demonstrated in the case of development of Barrandow Studios in the Czech Republic after the political and economic changes in the nineties (Millea 1997). At this stage, national and regional policy is also crucial (Mathieu 2006), as strategy of public authorities and work of the educational institutions and the business incubators (Davis et al. 2009; Bathelt 2002; Rosenfeld & Hornych 2010). Support funding at regional and national level, co-productions and tax reductions for the foreign film project plays a significant role in the operation of audiovisual sector (Morawetz et al. 2007). The development of the sector is closely linked to its strategy and the set priorities.

3. METHODOLOGY

In order to evaluate the situation of the audiovisual sector in Latvia during 2009-2013 analysis of the statistical data were carried out, as well as interviews and focus group discussions with the representatives of the sector. Statistical data analysis includes information on companies operating in the sector (number of companies, turnover, and number of employees), funding for producing

films and television programs, as well as results of film production (number of films, awards received). Statistical data analysis is based on the data provided by the Central Statistical Bureau of Latvia, National Film Centre and other public information. Only statistical data relating to film production, television and film screening companies were used to characterize the sector, because information on companies developing computer games and multimedia is not being assembled.

All interviews were conducted during the period of 2010-2012. Overall, 25 in-depth or semi-structured interviews (on average, an hour long) were conducted, as well as two focus group interviews were carried out (with 9 and 7 participants, respectively). In total 18 interviews with owners or managers of companies of the sector were carried out, as well as interviews with representatives of community organisations, of public institutions and of the higher education institutions. Interviews were carried out during the period of April 2010 and April 2012. This period was chosen in order to evaluate any changes in the opinion of respondents on various issues related to the development of the sector. The interview also found out if and how their perceptions of reality and future changed over the course of the chosen period. In order to collect and supplement results of the interviews conducted two focus group discussions were held in April 2012. These discussions were dedicated to the cooperation and development prospects of film and television industries, computer games and multimedia.

Based on the recordings of each interview and focus group discussion, retold version of the interviews and discussions was prepared. In addition, specific fragments were selected for the analysis. The only changes made to the source material were omission of redundancies, repetitions and text that did not refer to the specific topic of the interview. The reproduced interviews were analysed using content analysis method, applying grounded theory strategy. (Kroplijs & Raščevska 2010).

From each interview and focus group discussion important fragments (content units) were extracted. Each fragment was then labelled with the corresponding code. Codes similar in content were then combined in categories. All interview and discussion categories were sorted by common themes (concepts).

4. ANALYSIS OF COMPANIES OPERATING IN THE SECTOR

Statistical data on companies operating in the audiovisual sector were collected only on those enterprises that have indicated the specified fields shown in Table 1 (based on NACE Rev. 2) as their main economic activity.

Table 1

Types of activities included in statistical analysis (NACE Rev. 2)

NACE class	Type of activity
59.11	Producing of motion pictures, video films and televisions programs
59.12	Motion picture, video and television programme post-production activities
59.13	Motion picture, video and television programme distribution activities
59.14	Motion picture projection activities
60.20	Television programming and broadcasting services

Source: Central Statistical Bureau 2014

As can be seen in Table 2, the number of employees in the audiovisual sector has grown by more than 40% during the course of 2008-2012. That is mainly connected with both - new professionals arriving and existing companies being restructured, as well as other factors. Most of the companies are engaged in production of motion pictures and television programs (on average 50%) and

television programming and broadcasting services (on average 27%). On the other hand, the number of employees in the sector has decreased twice. It can be linked to emigration, change of employment (for instance, changing work in media to education field or similar) and reaching retirement age. The turnover of the company for this period has decreased by more than 33% (comparing 2008 data with 2009). It is mostly due to the economic crisis and the resulting reduction of funding for film production, as well as decrease in number of commercial contracts. Unsurprisingly after overcoming the lowest point of the crisis, acquiring new markets, and offering new products, the turnover has increased by more than 40% (when comparing 2009 and 2012). However, in 2012 the level of 2008 was still not reached.

Table 2

The characteristics of companies of the audiovisual sector (2008-2012)

Year	**2008.**	**2009.**	**2010.**	**2011.**	**2012.**
Number of companies	220	226	237	254	310
Number of employees	2286	1892	1749	1701	1143
Turnover (thousands of lats)	50911	33880	36356	45041	47346

Source: Central Statistical Bureau 2014

During this period, situation in the audiovisual sector can be characterised as partially stagnating. That is because despite the fact that number of companies operating in the sector has increased, it has not facilitated rise in the number of employees or turnover of the company. That, of course, can be attributed to the significant impact of economic crisis on the sector. In turn, the changes in the number of employees suggest that the majority of companies of the sector are micro companies or small enterprises. CSB data show that for more than 50% of the companies the number of employees is no more than one. According to the number of employees, more than 90% of all companies in the sector are micro companies or small enterprises.

Key indicators of business activities of the companies within the sector are also: external funding, number of products (motion pictures and television programs) produced and their international recognition (awards received).

A vital source of finance and development for audiovisual sector in Latvia is finance from the state and the European Union's funds. This allows to produce, film, post-produce, record and demonstrate motion pictures and television films in Latvia and foreign countries, and to co-produce them etc. (Table 3).

Table 3

Funding in Latvian film sector (2008-2012, LVL)

Year	Source of funding				**Total**	**Total**, EUR
	NFC	**SCCF**	**EU funding**	**RFF**		
2008	3 243 054	1 073 651	486 982	-	4 803 687	6 845 030
2009	1 770 464	461 680	323 079	-	2 555 223	3 634 256
2010	1 065 010	260 335	313 179	11 113	1 649 637	2 347 222
2011	1 164 010	241 828	546 899	289 255	2 241 992	2 895 067

2012	1 064 266	379 832	332 881	68 101	1 845 080	2 492 316

Source: National Film Centre 2014b; Film Riga 2014; Media Desk Latvia 2014

The most significant source of finance is funding from National Film Centre (NFC), which is annually awarded through tendering procedure. Projects of the film sector just like projects of other cultural industries are eligible for funding from State Culture Capital Foundation (SCCF) through tendering procedures. Various projects of the film sector are eligible for financing from European Union Funding programme MEDIA and European Union aid programme Eurimages, which is aimed at promoting of European co-production films. Riga Film Fund was founded in 2010 to facilitate implementation of film projects in Latvia (especially in Riga) in cooperation with local film studios.

The total funding available for the production of films during the period of 2010 - 2012 was 1.6 - 2.2 million LVL. However, as can be seen the funding has not been increased significantly since 2010. For example, by looking at overall funding of NFC and SCCF it can be seen that for 2013 the funding was smaller than for 2004 (National Film Centre 2014b). It is important to note that state financial support for the film sector in Estonia and Lithuania is greater than in Latvia. For instance, in 2012 the film sector in Estonia received 6.1 million euros but in Lithuania – 1.9 million euros (both cases do not include EU funding) (National Film Centre 2014a).

State subsidies for Latvian Television were as follows: in 2010/2011 – 7.1 million LVL and in 2012 – 7.8 million LVL, which does not fully cover the costs of goods sold (National Electronic Mass Media Council 2014).

An important indicator of the situation in the audiovisual sector is data on created products of the companies in the sector. In particular, for the films and television programs produced and broadcast. Statistical data from the Central Statistical Bureau of Latvia is shown in Table 4.

Table 4

Statistics of films and television programs produced by the audiovisual media organisations

	2008	**2009**	**2010**	**2011**	**2012**
Short films	25	33	29	18	15
Feature-length films	16	17	16	18	10
Lengths of programs by TV broadcasters (hours)	98606	97219	65401	52898	87 704

Source: Central Statistical Bureau 2014

The total number of films shown indicates that the film industry is characterised by the stability, and that despite the changes in the state financial support, on average 15 full-feature films and 24 short films are shown annually. However, it should be noted that the result of decrease or increase of funding can only be observed only two, three years later, which is directly related to the length of film production cycle. For instance, decrease in the number of feature-length films in 2012 can be attributed to the reduction in state funding for the film industry in 2009 and 2010 (Table 3). Situation is similar in the television sector where the overall length of TV programs are affected by the economic situation (especially for commercial television channels), the amount of public funding for Latvian Television and other external factors. Such as implementation of full digital broadcasting in the entire territory of Latvia 2010. It left an impact on number of TV broadcasters. In the year 2010, their number decreased from 25 to 19 and in 2011, to as little as to 17 broadcasters. The result of this was reduction of the total length of programming shown (Central Statistical Bureau 2014).

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The international competitiveness of the audiovisual media is characterized by the number of co-production projects carried out. In 2010 According to National Film Centre, companies of audiovisual sector in Latvia have participated in five co-production projects. In 2011 - two, in 2012 - six (National Film Centre 2014b).

An important characteristic of the performance of the audiovisual media sector is the number of international prizes received. For instance, in 2010 Latvian films received 12 international film awards, in 2011 - 20 and in 2012 - 48 awards (National Film Centre 2014b). This is a proof of the high artistic quality of films shown at the international level.

As can be seen in Table 5, during the last 5 years the number cinema attendance has not significantly changed. With the exception of 2012, where it can be explained only if taking into account the tendencies of next years. However, the number people going to the films screenings has not drastically changed. During the last five years, it has been under 5% of the overall cinema attendance. The only exception was 2010 due to premieres of specific films. In comparison, in 2012, attendance of local films in Estonia was 7.6% and in Lithuania – 2.54%, which can be explained by the differences of film premieres.

Table 5

Cinema attendance statistics (2008-2012)

Year	**2008**	**2009**	**2010**	**2011**	**2012**
Cinema attendance per 1000 residents	1066	908	1004	1001	1124
Latvian film attendance (% of total)	4.90	4.28	6.95	4.48	4.26

Source: Central Statistical Bureau 2014; National Film Centre 2014b

"Kino Citadele" which belongs to SIA "Forum Cinemas" is the leading film theatre in Latvia. In 2012, 50% of all filmgoers in Latvia and 57% in Riga went to this film theatre.

The most watched TV channels in Latvia can be determined by using data provided by the public opinion and media research agency "TNS Latvia" (Figure 1).

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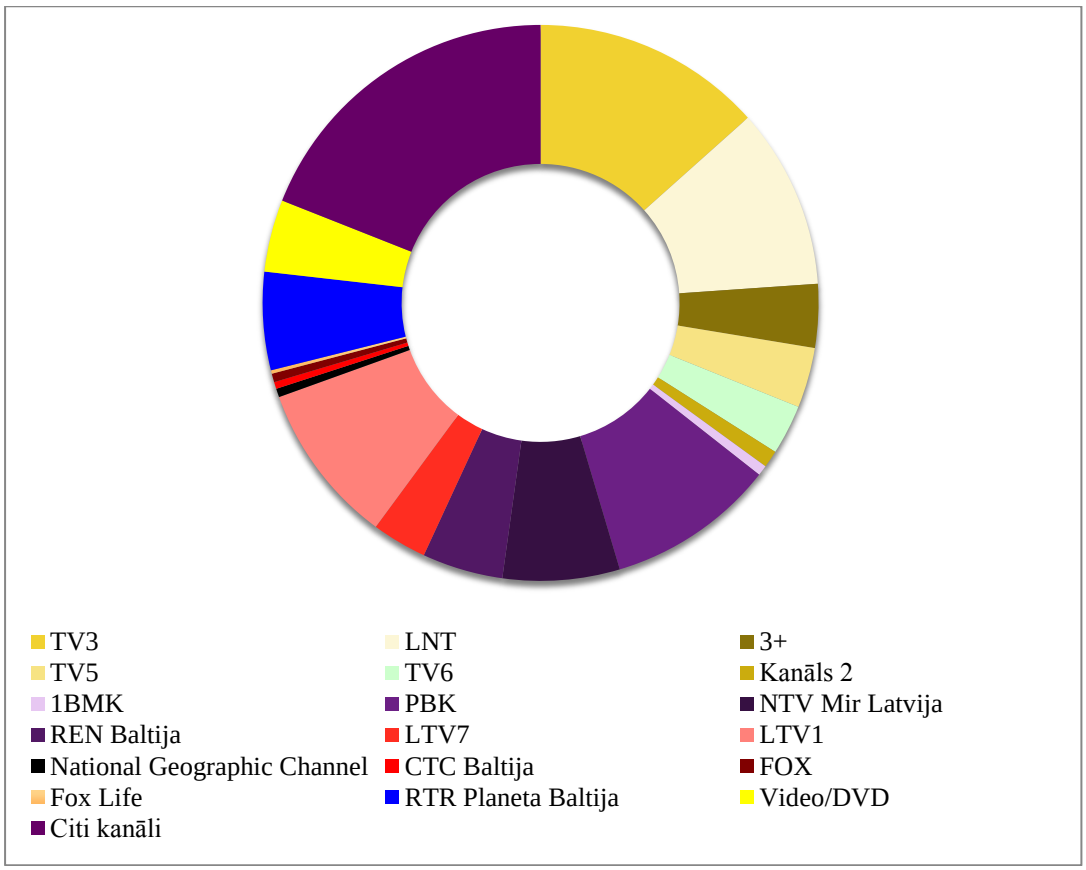

Figure 1. The average time spent watching Latvian TV channels.
Source: TNS Latvia, 2014

According to data by the public opinion and media research agency "TNS Latvia", the most watched TV channels were TV3 and LNT, PBK and NTV Mir, LTV1 and LTV7. The key players of TV sector in Latvia are the companies SIA "MTG Latvia", which owns television channels TV3, LNT, 3+, TV6, Channel 2 and TV5, and SIA "Baltijas mediju alianse", which is the holding company of TV channels PBK, NTV Mir Baltic and 1′st Baltic Music Channel and REN TV Baltija and VSIA "Latvijas televīzija", which is the only public television in Latvia with TV channels LTV1 and LTV7.

5. ANALYSIS OF RESULTS OF INTERVIEWS AND DISCUSSIONS

Interviews and focus group discussions (hereafter interviews) with representatives of the audiovisual sector allowed for identifying the key factors that affect the sector. Table 6 shows summary of the most common categories and concepts of interviews with representatives from the audiovisual sector. Overall, there were 24 most common categories under such concepts: quality of education, competitiveness of the sector, sector management, public funding, and operation of enterprises within the sector and demand of the products.

Table 6

Interview categories and concepts (table created by the author)

Concept	Category	Frequency of mentioning
Sector management	Lack of strategy	9
	Lack of leadership	2
	Lack of promotion of excellence	2
	Reputation of the sector	6

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Concept	Category	Frequency of mentioning
Public funding	Lack of funding	13
	Inconstancy of funding	5
	Fragmentation of funding	5
	Criteria for awarding	5
Rivalry and cooperation in the sector	"Principle of farmsteads"	4
	Clash of personalities	2
	Competition for funding	3
	Lack of cooperation in the sector	10
Activity of enterprises in the sector	"One person" companies	4
	Crisis management	4
	Technological developments	6
	Focus on business	12
Demand for products of the sector	Focus on internal market	3
	Distribution system	6
	Participation in the foreign markets	13
	Necessity for marketing	9
	Disinterest from the audience	8
	Artistic value	4
Quality of education	Improper methodology	2
	Deficiencies in education	10

Note: most common categories are highlighted in blue.

When evaluating the interaction of categories, one should keep in mind that categories that are included in the same concept influence one another and therefore the next six sections contain characteristics of these categories and analysis of their interaction.

5.1 Sector management

The management of audiovisual sector in Latvia is carried out by government agencies: National Film Centre and National Electronic Mass Media Council, as well as non-governmental organizations formed by enterprises of the sector and creative professionals. Sector management was a topic that was frequently mentioned during the interviews. Usually it was linked to the lack of sector strategy or failure of implementing it and deterioration of reputation due to mistakes at the management level. Lack of leadership was mentioned in the interviews, with emphasise on the inability of the current government to lobby common interests of the sector. Such as, the increase of public funding, lack of priorities or frequent change of these priorities, as well as inability to solve conflicts within the sector, favouritism, inability to unite the sector for dealing with common issues

and focus on administrative issues rather than on advancing excellence. The lack of leadership has been evident since the nineties. In addition, that obviously has not facilitated neither development of the sector, nor cooperation.

During the interviews, it was pointed out that people see management of NFC as allocation of public funding. However, core mechanical awarding of public funding cannot be considered as implementation of the strategy. That is because one of most significant features of the strategy within the sector is setting up priorities and allocation of public funding according to such priorities. Also taking responsibility for projects supported, especially by providing quality and distribution. That is particularly important in a situation where the financial allocation is small. Therefore, it is necessary to strategically ensure allocation of funds towards "outstanding" projects - both in terms of artistic value and audience reaction. This aspect is very important, especially since in the previous management of the sector allocation of public funding was considered a key performance element. The lack of strategy in allocating the funding, as well as dealing with other important issues related to the growth of the industry, is seen as one of the most important development factors

Largely such situation represents lack of leadership - both at the level of state institutions and at the level of management of public organisations. Leadership capabilities of the sector management are necessary for solving of common issues, lobbying, establishing reputation, image and visibility of the sector, as well as facilitation of substantial change and developments.

5.2 Public funding

As it has been already examined in this paper, public funding is essential to the operation of the audiovisual sector and the creation of audiovisual work. Rather often categories related to public funding in the sector came up in the interviews, with particular emphasis on lack of such funding. Often the mention of the lack of funding can be explained by the fact that in the period before interviews were conducted (2004-2008) public funding in the sector substantially increased. Starting from 2009/2010 the amount of funding decreased significantly. Since then public funding in the film sector has not reached the level of 2005. The lack of public funding and its reduction has also had a significant impact on other categories. For instance, the small amount of funding available intensifies the competitiveness among the companies within the sector and influence capability of companies to take part in external markets. The lack of funding also influences distribution systems that provide availability of audiovisual projects, their operation and development, as well as does not allow for provision of the expenses necessary for marketing activities. Lastly, the lack of funding also influences the implementation of education programs that does not allow the development of the material and technical basis, invite guest lecturers, improve quality of the study programmes and fulfil demands of the labour market.

Other categories falling under the public funding concept are also important. If public funding is a significant base for the operation of the sector and enterprises, then companies of the sector compete amongst themselves. On the one hand, smaller funding means intense competition. On the other hand, it creates larger funding fragmentation. Almost all film studios compete with each other for available public funding (in television field there is also competition for advertisements and other revenues) and not for audience for their films. Thus in circumstance when there is a long-term lack of funding in the sector, the competition for it intensifies. Partly this funding is also a matter of survival for creative professionals. In such case the fact that funding is not granted is often taken emotionally. That often causes personal clashes because in most cases committees that decide the allocation of the funding, also consist of the professionals of the sector.

Such situation contributes towards the use of fragmented funding. As a result, production times are longer or small budget films and TV programs made that do not always manage to engage the audience.

Lack of funding leads to competition among companies of the sector and to conflicts among professionals, which does not contribute to cooperation of the companies. It also leaves its mark on artistic value on products created and interest from the audience.

5.3 Rivalry and cooperation in the sector

Cooperation between competing companies in solving common issues and increasing of the competitive strength in the sector is vital for its development. As it was discussed in the previous chapter, in the audiovisual sector competition largely is due to public funding and not market share or sales. Although the latter is relevant in the television sector, where TV channels are competing for larger audience and advertising revenue). In situation where comparatively small amount of public funding is available or it has rapidly decreased (it also applies to the television advertising revenue), competition in the sector worsens, which sometimes also leads also to clash of personalities. It is evident among companies of animation sector, as it has been stated in several interviews.

Nevertheless, these are just some of the reasons for lack of cooperation within the sector, as well as related sectors. For instance, from time to time conflicts between companies of the sector and public bodies can be observed Sometimes competition for public funding turns into personal conflicts which then becoming public have a negative impact on reputation and image of the sector. There is also lack of cooperation among several fields of the sector, such as television and cinema.

Lack of cooperation within the sector is influenced by clashes in the creative work, as well as "farmstead principle" which is characteristic to the mentality. Usually reluctance to cooperate is related to previous internal negative experience, distrust and conflicts over allocation of funding. On the other hand, as several interviewees pointed out, in some cases when it seems that the whole operation of the sector is endangered, suddenly internal harmony is achieved and common interests are protected. Lack of cooperation also pertains to interaction with related sectors, such as the computer game development sector, etc. Nevertheless, cross-sectorial cooperation will be very significant, because sectors not only complement one another, but also have a potential of merging in Latvia.

5.4 Activity of enterprises in the sector

Other very common topics in interviews were management of companies in the sector, strategy and development. Most often mentioned category was "orientation towards business" meaning focus of companies of the sector on business activities, not just creative process. If the majority of management of the companies within the sector would see the creative process and products produced as source of income not just as subsidisable activities then the development of the whole sector would be much faster. Fragmentation of the sector creates weakness for companies. Often film studios are founded as tool for implementation of director's creative ideas rather than for doing business and creating jobs and generating income. As was often mentioned in interviews, it is rare for creative professionals to also be successful producers and entrepreneurs.

Taking into account the newest tendencies is essential for the development of a company and its competitiveness. It applies both to implementation of the newest technologies and meeting the needs of audience and clients. Technological change has led to significant changes in the operation of companies within the sector. Currently, it is easier to enter the audiovisual sector than, let us say ten years ago. Technological costs have gone down and access to technologies is better, which, of course contributes to the establishment of new companies. Still, not all companies are ready for such change. That is because time for implementation of technology has become significantly shorter, and distribution channels and platforms are changing as well. Convergence of technologies and integration with related sectors is taking place. Therefore, companies should be flexible and able to adapt quickly.

A major aspect of the audiovisual sector is management of crises, which usually arise if there is no luck in attracting public funding for a particular project. In the event of crisis situation previously acquired reputation, relationships and financial provisions are important. The crisis is usually associated with decrease of workload and reduction in the number of employees, as well as looking for other sources of income. Many interview respondents pointed out that it is important to have fair explanation of situation to the employees, business partners and to the audience - the viewers. Crises are also perceived as contributing factor to the development.

5.5 Demand for products of the sector

Demand for the products (films, TV programs) created by the companies of the sector is one of the most commonly mentioned themes in the interviews. Products are made available through distribution system (cinemas, television broadcast, etc.). As shown in previous chapter their amount has been considerably reduced since the nineties. At the same time, there have been significant changes. In the light of decrease in population and demand, especially outside of Riga, as well as high costs of maintenance and retrofitting, many cinemas and film screening sites were closed. At the same time, digital platforms for film screenings were not available and sufficiently developed. Because of this, it was rare for those few films that were released since the nineties to reach wide audiences and, even if they did, they were mostly shown on television. It was influenced by the small budget for film screenings, which did not include expenses for film marketing and screening. As was pointed out by several respondents - change in this situation initiated by the previous general manager of Latvian Independent Television and film producer - Andrejs Ekis (his films include "Dangerous summer", "Defenders of Riga", "Dream Team 1935" etc.). Films produced by him screened at places where there was no film screening equipment, and they were shown on LNT channel. Others producers followed this example.

Interest of smaller audiences was sparked not only due to the "collapse" of distribution systems, but, as already mentioned above, films made in conditions of small funding and low artistic value, which made the viewers "get up and run away from the cinemas". Nevertheless high artistic value of films is essential because it is prerequisite for chance to receive prizes both in Latvia and abroad, and it is significant factor for further funding for Latvian films and them being demonstrated abroad.

One of the most mentioned categories in interviews was offering products to foreign markets. This applies, for instance, to the export of services, the creation of co-productions and demonstration of the production abroad. Unwillingness to cooperate with foreign clients has been considered as one of the major contributing factors for industry recession at the beginning of nineties. People interviewed had mixed feelings about the participation in the foreign markets - it was seen either as primary to the development of the sector or as necessary but not essential. It was noted in the interviews that participation in foreign markets is necessary because foreign work projects allow gaining experience, developing contacts and modernising technical facilities, as well as gaining access to markets of business partners. On the other hand, in some cases operation in foreign markets is not only economical advantage, but also creative teamwork, thus creating products of high artistic value. Still it was noted in the interviews that orders from abroad provide work and income but do not provide for local cinema traditions and cultural values. This is probably because a large part of managers is more focused on internal market.

During the last few years there have been several preconditions set up for companies to starting operating in foreign markets and it has been put forward as one of the key factors for sector development. That clearly will facilitate the development of the sector, because, in order to successfully attract clients, marketing activities and cooperation with specialists and technologies are required. However, improvement of the distribution system in the local market important is also important, as is production of products popular among different target audiences, as well as development of marketing communication.

5.6 Quality of education in the sector

Quality has a crucial role for the development of the sector. Unfortunately, respondents pointed out some significant problems that can be classified into two groups: inadequate study methods and deficiencies in the content of education programs. At the beginning of the nineties education in the sector was developed practically from scratch, therefore such problems could occur. It was emphasized in several interviews that the first students were educated as "geniuses"; therefore, they were making films for themselves and not for the audience. Other problems with methodology are related to the lack of business and management courses in education programs. That influences the lack of focus towards business in the work of film studios and other enterprises.

Interviews provided information on problems in education programs of the sector. This is mainly because their content does not correspond with the needs of work market and demands to be met for the development of the sector. In addition, often there is no sufficient material and technical basis that is necessary for successful study process. It was noted in the interviews that, for instance, the lack of funding for animation field and the need for including of film education in secondary education programs.

6. CONCLUSIONS

1. Although the audiovisual sector concept is relatively new, it is however included at the various levels of policy planning documents, particularly at the European Union level. In recent years, there have been integration and interaction of rapidly changing audiovisual sectors observed both at the policy planning and academic levels.
2. Statistical analysis of data for 2008-2012 showed that the sector in Latvia is somewhat similar and at the same time different as elsewhere in European countries. The major differences are as follows: greater fragmentation, significantly insufficient public financing and lack of development priorities.
3. A similar sector assessment came from conducted interviews and focus group discussions and it showed that the financial and economic crisis in Latvia has led to substantial uncertainty in the sector.
4. The study showed that situation of uncertainty within the sector could have been lessened with clear leadership, establishment of priorities, as well as better work in the pre-crisis period.
5. The most significant errors were made in the pre-crisis period: ineffective use of public funding, problems in the sector's education programs, lack of strategy and inability to engage local audience.
6. Sharp reduction of public financing in 2009 and 2010 certainly contributed to the deterioration of internal relations within the sector and consequently of the public image.

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HYBRID SOCIAL ENTERPRISES: ASSESSMENT OF FINANCIAL SUSTAINABILITY

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Abstract

Purpose – The presence of the society's social problems from one side and the shortage of financial resources to solve these problems – from the other side, lead to the need to search for alternatives. Nowadays social entrepreneurship has been acknowledged as a tool in addressing social and economic issues of the society, whereas the question concerning the assurance of social enterprises' financial sustainability still remains the topical one. The purpose of this article is the study of hybrid social enterprises' theoretical concepts and the assessment of their financial sustainability by the examples of the Latvian social enterprises.

Design/methodology/approach – For primary data collection, in-depth semi-structured interviews are used, for financial sustainability assessment - comparative and financial analysis.

Findings – In this article, the authors provide the concept of hybrid social enterprises, identify the features of different business models of hybrid social enterprises, assess the level of their financial sustainability and identify the most significant factors influencing it.

Originality/value – The quantitative assessment of financial stability of various hybrid social enterprises' types is presented, by the examples of social enterprises, which operate in Latvia.

Keywords: hybrid social enterprise, financial sustainability, efficiency of economic activity

1. INTRODUCTION

Social enterprises (henceforth SEs), combat social problems caused by a partial failure of public and social institutions in addressing societies' needs. This social imbalance generates a constant need for empirical researches. The article is focused on the issues of financial sustainability of social enterprises, as well as to what extent might social entrepreneurs subjugate their social mission to their profit mission in order to achieve the financial sustainability. The article bridges the gap in the existing knowledge on how social enterprises in Latvia might be financially sustainable.

Thus, the purpose of this article is to summarize the theoretical concepts of hybrid social enterprises and assess the financial sustainability of various types of hybrid social enterprises in Latvia. In order to fulfil the aim the following tasks have been assigned:

1. to determine the essence of hybrid SEs pointing out their distinguishing and contradicting aspects;
2. to identify existing hybrid SEs models in Latvia;
3. to assess the financial stability of various types of hybrid social enterprises operating in Latvia and to summarise the main prerequisites for the sustainability of SEs.

The hypothesis of the research: Certain types of hybrid SEs can ensure their financial sustainability in the present social and economic conditions without external funding.

This article provides an overview of hybrid models of SEs, as well as presents findings of prominent authors in this field such as Defourny, J., Nyssens, M., Alter K., Dees G., Dart, R., Emerson J., Etchart N., Lee D., Arthur, L., Billis, D., Borzaga, C., Bornstein, D., Boschee, J., Bull, M., Ridley-Duff, R. J., Spear, R., Westall, A., Chalkley, D., Seanor, P. on issues and concepts of (hybrid) social enterprises. In the study of Latvian hybrid SEs examples, the major emphasis is placed on the issue of their financial sustainability.

During the carrying out of this study, the following research methods were applied - descriptive method, the methods of financial analysis, logical and comparative analysis, generalization. As the informative basis of the article data was used professional literature, the informative concept on social entrepreneurship prepared by the Latvian Ministry of Welfare working group, as well as various publications in scientific databases, as well as the financial accountability of the analysed companies. To collect information on the activities of hybrid companies in Latvia, questionnaires and interviews with representatives of social enterprises were used.

The paper consists of three parts. The first part provides an overview of the literature, where the authors have summarized different and in some cases even contradicting viewpoints on the essence of hybrid social enterprises representing their own definition of this concept and considering the distinctive features of different models of hybrid social enterprises. In the second part, the methodology of social enterprises' financial sustainability analysis has been examined. In the third part the analysis of financial sustainability of hybrid social enterprises operating in Latvia has been carried out, and the factors that have the most significant impact on their financial sustainability have been identified.

2. THEORETICAL BACKGROUND

The authors adhere to the opinion that one of the essential characteristics of social entrepreneurship is independence from donors, grants and other financial support programs (E. Pancenko et al., 2012). The combination of such goals as the creation of social and economic values is characteristic to "hybrid" organizations. Particularly "hybrid" organization, fulfilling their social objectives, thrive simultaneously to achieve financial sustainability for the implementation of social aims.

It should be noted that a clear definition of "hybrid" organizations is still not formulated. The authors of this paper support the viewpoint that has been stated by researches in the field of social entrepreneurship such as Alter K., Dees G., Lee D., Reis T., that hybrid SEs appeal to double motives combining goodwill and self-interest, as their goals also have a dual nature of social and economic values creation. Hybrids are intermediate types of the organisations between purely philanthropic and commercial ones, combining the features from each of them – from one side strong emphasis on social impact, from the other side business growth and economic value creation. Hybrid spectrum includes the following types of organizations: non-profits with income-generating activities; social enterprises; socially responsible business; corporations practising social responsibility. Non-profit organisations with commercial activities generate economic value to fund social programs which main aim is social value creation, SEs bring social change by business methods and for-profit organisations might create social value by introducing corporate social responsibility programmes (Alter, 2007). Profit is the primary purpose of socially responsible businesses and corporations practicing social responsibly, whereas social impact is the primary purpose of hybrid SEs and non-profits with income-generating activities. Though among researches contradicting viewpoints on whether it is possible to meet successfully dual goals at once without tension or not have been stated (see tab.1).

Table 1

Contradicting viewpoints on dual goals of hybrid SEs

Authors	**Dual goals creation**
	Optimistic
Dees & Anderson	There is no dichotomy in meeting two opposing goals - social and economic ones.
Alter	Social and economic goals are held in equilibrium.
Emerson, Evers	Blended value creation is a holistic notion.

	Pessimistic / Realistic
Pearce, Pharoah, Arthur, Curtis,	There is a great doubt of a perfect dual value mix.
Seanor, Bull, Ridley-Duff	Tensions exist between the social and economic domains and goals.

Source: summarised by authors

Kerlin (2006) notes that the term social enterprise means different things in different national contexts. In the USA, an emphasis is placed upon social enterprise goals being linked to the social entrepreneur's individual characteristics rather than the effects of a collective identity (Bull 2006; Spear 2007; Westall & Chalkley 2007). The authors of this paper support the European standpoint, that is, collective identity concept of hybrid SEs. What is more, the issue of the focus of hybrid SEs also differs among scholars (see Figure 1.)

The focus of Hybrid SEs

On social objectives since the models used for hybrid social enterprises' development are all too often supported by a strategic emphasis that subordinates to financial one. Arthur, Curtis, Light, Pharoah, Alter, Anheier, Evers; Foster & Bradach, Georke, Mendel	**On financial** frameworks and income generation to serve a social purpose, moving to an operational definition more narrowly focused on a market-based solution and business-like models. Dart

Figure 1. The focus of Hybrid SEs
Source: summarised by authors

There have been expressed opposing standpoints regarding the focus of hybrid SEs, since on one hand the primary goal is social impact and solving social issues of the society, on the other hand if they are called enterprises they have to employ business methods and strive for financial sustainability. This has resulted in two disparate discourses with academicians and practitioners failing to acknowledge or refer to one another's work (Nyssens 2006b). Thus, hybrid SEs definitions are dependant on national, global and contextual issues. Several researches (Anheier 2000; Evers 2001; Foster & Bradach 2005; Georke 2003; Mendel 2003) have expressed concerns that by emphasizing business over social values, various aims of social enterprises may not be attended to and social missions may 'drift'. During periods of secure funding, hybrid SEs able to pursue social aims actively, while during financially insecure periods they focus upon economic goals, pulling back from the promotion of social goals. This back and forth movement between goals, is reflected in a presumption that organisations which desire to become more efficient are seen as moving in a 'McDonaldization' production-like process toward the commercial end of the spectrum (Dart 2004; Dees et al. 2001; Hardy 2004). However, Alter's (2007) alternative voice is that hybrid SEs are focussed on their social missions (2004). There are multiple attitudes ranging from: enthusiasm and acceptance of business-like behaviour to a radical view of enterprise to be avoided all together. Seanor and Meaton consider that a focus upon commercialisation alienates social entrepreneurs as well as enthuses (Seanor & Meaton, 2008). Gregory Dees, who is often referred to as the "father of social entrepreneurship education" said: "Many of the large firms that

make up our markets are investor-owned and have a responsibility to deliver profits to their investors. But most of the experiments to find solutions to social problems are not going to meet that financial threshold, and that is where we need social entrepreneurship—to fill the gap". Besides, the authors of this article would like to put the emphasis on that hybrid SEs are enterprises first. However, at the same time, the authors believe, that as hybrid social enterprises may be considered only those businesses that have social mission, regardless of their legal form.

A lack of a clear understanding of the number of hybrid social enterprises, a variety of social entrepreneurship forms and social objectives performed have led to the confused identity of hybrid SEs, which has been reflected in debates within the literature. So, overall taking all above mentioned into consideration the authors of this paper have defined hybrid social enterprises as businesses which use entrepreneurship tools, innovation and market-based approaches to achieve social goals, while being focused on making profit from commercial activities to fund social programs.

Depending on the degree of integration of social programs and business processes, there are three business models (types) of Hybrid SEs:

1. Embedded SEs
2. Integrated SEs
3. External SEs (Alter, 2007)

Table 2

The distinctive features of business models of hybrid SEs

Distinctive features	**Embedded SEs**	**Integrated SEs**	**External SEs**
Operational model	Social and economic activities are united	Social and economic activities are synergetic to reduce costs, to leverage assets, to enhance systems while implementing social activities	Social and economic activities are linked only through funding relation that is the part of the earned income from commercial activities is allocated for the implementation social activities
Social activities	Social activities are the central purpose of business	Social activities are related to business activities expanding or strengthening them	Social activities are separated from business
Target groups (beneficiaries)	Involved in an enterprise activities may be owners or employees of an enterprise	May or may not be involved in the enterprise's operations as employees or customers	Beneficiaries of social activities results and are not involved in enterprise operations
Financial source of the social programmes	Own profit	Own profit	Profit received from the other type of business

Source: summarised by authors

As can be seen from Table 2, each of the models has its own distinctive features combining economic and social activities, the degree of involvement in these activities of beneficiaries and in social programs' financing sources. The common features are an invariable presence of social goals and the ability to finance social programs. It should be bared in mind that organizations may change their hybrid forms over time, decreasing or increasing their level of hybridity and, thereby also shifting across different zones of hybridity (Billis, 2010).

According to the researches and practitioners, most of hybrid SEs acknowledge a need to become more financially secure, while stressing that they have no intention of moving to the economic end of the spectrum. They admit the need of financial sustainability as a strategic drive of

achieving the social goals insisting that the social value is the main concern – not the economic one. Hybrid SEs are conceptually engaged in market oriented economic activities, while providing goods and services that serve social missions (Defourny, 2009). They apply principles of commercial markets to achieve greater efficiency, efficacy and innovation in supplying public goods and social services (Kerlin, 2006, 2010).

3. METHODOLOGY APPLIED IN THE RESEARCH

Despite the fact that in contemporary economic literature, there is still no consensus on the definition of "financial sustainability" of an organization, the authors under the financial sustainability of an enterprise imply such financial condition, when an enterprise's financial independence from borrowed sources and its solvency (liquidity) are ensured.

Also, it is worth noting that financial sustainability depends on internal and external factors affecting operations of an enterprise. Among the internal factors in the first place it should be mentioned the sufficiency of profit. In addition, sustainability depends also on the assortment, the quality of products, the property structure, the stock, the image of an enterprise, its business organization and management, etc. Besides, the company's life cycle phase should be taken into account, with the characteristic features of a particular life cycle phase, and the level of solvency.

External factors are characterized by the degree of an enterprise's economic environment sustainability and by stable revenues from its sales, which are influenced by the stability of the economy, the position of an enterprise in the industry, a competitive environment, relationships with suppliers, customers, creditors, and other stakeholders (Yablukova).

To assess the financial sustainability the authors have used the following approaches:

1. It is the financial sustainability level statement in the long-term period on the basis of the business capital structure study. Equity Ratio coefficient was used for that:

Equity Ratio = Total Equity / Total Assets (1)

Exceeding the standard value (> 0.5) indicates on an enterprise's financial sustainability and independence from external sources.

2. It is current solvency assessment on the basis of determining the sufficiency of current assets to cover current liabilities. Current Ratio coefficient was used for that:

Current Ratio = Current Assets/Current Liabilities (2)

The value of this coefficient in the range from 1 to 3 indicates a normal current ratio. The value of this coefficient of less than 1 means a lack of ability to pay, and the value of more than 3 indicates an excessive accumulation of working capital or the irrational choice of sources to finance working capital influencing the reduction of the company's profits.

3. It should be noted, that the use of the financial ratios method for the financial sustainability assessment is insufficient, as it gives limited information and does not reveal many important factors effecting the amount of equity capital - the guarantor of an enterprise financial independence. The basic conditions for the sustainable economic activity of a company is generating enough profit for the development. In turn, the amount of profit depends on sales' volume and an effective use of the company's resources (assets), which affect the amount of costs associated with the production and sale of products. Thus, an express-analysis of the financial sustainability was complemented by considering the dynamics of indicators affecting directly the company's profit: net turnover, assets, the cost of production.

Public financial statements (Balance Sheet and Income Statement) were used as data for determining the enterprises' financial sustainability.

The selection of enterprises for the analysis was conducted out of the companies, which positioned themselves as social ones and matched hybrid enterprises characteristics presented in table 2. The selection of subjects for the analysis was executed out of the companies operating in Latvia, which are engaged in entrepreneurial activities on the basis of market (commercial)

principles and positioning themselves as social ones. For each type of hybrid models on the basis of corresponding to the features of hybrid enterprises presented in table 2 were chosen social enterprises from Latvia. For the objectivity of the comparative analysis all three chosen enterprises are companies with a capital and their annual accounts on structure do not differ from the accountability of other commercial enterprises.

To analyse the qualitative characteristics of the activities and to identify barriers to achieve financial sustainability, the surveys and in-depth interviews with the representatives (managers) working for hybrid social enterprises in Latvia have been carried out. For the analysis and synthesis of qualitative characteristics of social enterprises in Latvia and identification of barriers in the achievement of their financial sustainability a broader research of social entrepreneurship in the country was carried out, including the study of published in press materials, the Internet sites, as well as the qualitative research methods were utilized: questionnaires and interviews with representatives (heads) of various social enterprises: "Wooly World" Ltd, "Dizz" Ltd, Foundation "Partners in Ideas Fund" (Otrā Elpa), Association "Pins".

4. FINANCIAL SUSTAINABILITY OF HYBRID SES IN LATVIA

The subjects of this study were the following companies: "Wooly World" Ltd, "Dizz" Ltd, "Ziedot.lv Social Enterprise" Ltd. According to the characteristics of hybrid enterprises presented in table 2, to the first hybrid enterprise model (Embedded SE) belongs "Wooly World" Ltd, as in the manufacturing process of the company's products are involved disabled people from the blind association. To the second hybrid enterprise model (Integrated SE) belongs "Dizz" Ltd, because on the industrial base of this company are manufactured products for disabled people with limited mobility, and to the third hybrid enterprise model (External SE) belongs "Ziedot.lv Social Enterprise" Ltd, because the generated profit from its main business it invests into social programs. In table 3 general characteristics of the examined companies are presented.

Table 3

Latvian hybrid SEs

	"Wooly World" Ltd	**"Dizz" Ltd** (HOPP)	**"Ziedot.lv Social Enterprise" Ltd**
Hybrid SE model	Embedded	Integrated	External
Company's main activity /-ies	Manufacture and sale of soft (felted) toys	Tailor-made bicycles for people with disabilities	Providing high-quality and competitive services to Latvian business and investing gained profit into "Ziedot.lv Social Enterprise" charitable projects
Social beneficiaries (clients)	People with disabilities from blind association from the city of Liepaja are involved into work	Disabled people with balance disorders, prosthetic is the target audience	People in need, charitable projects participants
Year of establishment	2011	2010	2009

Source: summarised by authors

The results of Latvian social enterprises' financial sustainability level analysis are presented in table 4.

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Table 4

Financial sustainability analysis

Indicators	**"Wooly World" Ltd**		**"Dizz" Ltd** (HOPP)		**"Ziedot.lv Social Enterprise" Ltd**	
	2011	2012	2011	2012	2011	2012
1.Equity capital, EUR	3402	-2588	-6399	-17517	94322	73070
2. Total assets, EUR	4314	17177	19328	23973	106821	104237
3. Equity Ratio (p.1/p.2)	**0,79**	**-0,15**	**-0,33**	**-0,73**	**0,88**	**0,70**
Reference:						
Fixed (share) capital, EUR	2 846	2 846	1	1	142 287	142 287
Profit (loss) for the year, EUR	556	-5 990	-6 400	-11 118	-24 889	-21 252

Source: Lursoft data, authors' calculations

From the data presented in table 4 is clearly seen that the coefficient's rate of Equity Ratio of the analyzed companies was absolutely different. Moreover, only "Ziedot.lv Social Enterprise" Ltd possessed this coefficient within the normative level (>0,5). In 2012 at "Wooly World" Ltd, it fell sharply to a negative value (-0,15) and "Dizz" Ltd also had a negative value of this coefficient, which indicated the loss of financial independence of these companies.

All three companies showed a declining financial sustainability's tendency, due to the losses from operations in 2012, which led to a decrease in the share of equity capital in total amount of company's funds. Despite the loss, "Ziedot.lv Social Enterprise" Ltd managed to maintain an adequate level of financial sustainability (0,7 in 2012) due to a large initial value of its equity capital (142287 EUR), which served as a solid material basis allowing to survive even experiencing temporary difficulties. As seen from table 4 the amount of "Wooly World" Ltd fixed capital of 2846 EUR was insufficient, so that after making loss in 2012 that led the company to the loss of its financial sustainability. The worst situation was with "Dizz" Ltd, having a minimum amount of fixed capital of 1,42 EUR annual losses led the company to the loss of its financial independence. Analysis of the current solvency is presented in table 5.

Table 5

The analysis of current solvency

Indicators	**"Wooly World" Ltd**		**"Dizz" Ltd** (HOPP)		**"Ziedot.lv Social Enterprise" Ltd**	
	2011	2012	2011	2012	2011	2012
1. Current Assets, EUR	4314	13731	13563	14991	37965	46021
2. Short-term creditors, EUR	912	19765	20575	38870	12499	31167
Current Ratio (p.1/p.2)	**4,73**	**0,69**	**0,66**	**0,39**	**3,04**	**1,48**

Source: Lursoft data, authors' calculations

For ensuring settlements with short-term creditors, the company should have enough working capital on accounts or in other forms of liquid working capital (short-term securities, receivables, inventories), therefore, the ratio of current assets and short-term creditors should be greater than 1 (but not more than 3).

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As the total liquidity coefficient calculations presented in table 5 show the given recommendation was performed only by one company "Ziedot.lv Social Enterprise" Ltd (3,04 in 2011 and 1,48 in 2012). The coefficient rate at "Wooly World" Ltd varied and in 2011 exceeded the standard value (4,73), and in 2012 was below the norm (0,69). The coefficient rate at "Dizz" Ltd was below the acceptable level, constituting 0,66 in 2011 and 0,39 in 2012. By the end of 2012 companies – "Wooly World" Ltd and "Dizz" Ltd did not have enough working capital to pay their short-term liabilities.

Thus, presented in tables 4 and 5 calculations showed that social enterprises, which carry out entrepreneurial activities in Latvia differ in terms of financial sustainability rate and current solvency:

- "Ziedot.lv Social Enterprise" Ltd had a satisfactory level of financial sustainability and ability to repay independently short-term liabilities;
- "Wooly World" Ltd had an unstable situation: at the end of 2011 there were quite satisfactory financial sustainability and solvency rates, whereas by the end of 2012 the situation changed radically, the enterprise lost its financial sustainability and a low liquidity ratio indicates a problem with the payment of accounts payable;
- "Dizz" Ltd was financially unsustainable, with the lack of working capital to pay short-term liabilities, and the situation was deteriorating.

For receiving more information about the financial sustainability of the companies, in table 6 the analysis of profit dynamic and of the main factors affecting it: revenues, cost of production, assets is presented.

Table 6

Analysis of asset growth, net turnover, profit (loss) for 2011 - 2012

Indicators	**"Wooly World" Ltd**			**"Dizz" Ltd** (HOPP)			**"Ziedot.lv Social Enterprise" Ltd**		
	2012 EUR	2011 EUR	2012/ 2011 %	2012 EUR	2011 EUR	2012/ 2011%	2012 EUR	2011 EUR	2012/ 2011%
1. Assets	**17 177**	**43 14**	**398**	**239 73**	**1932 8**	**12 4**	**1042 37**	**1068 21**	**98**
2. Net turnover	**20 943**	**58 58**	**358**	**104 924**	**6127 6**	**17 1**	**4955 3**	**3278 6**	**151**
3. Cost	**23 115**	**26 31**	**879**	**115 418**	**7057 2**	**16 4**	**5241 0**	**4207 1**	**125**
4. Gross profit (loss)	**-2171**	**32 27**	**167**	**-10494**	**-9296**	**11 3**	**-2857**	**-9286**	**69**

Source: Lursoft data, authors' calculations

It is clearly seen, from the table 6 that in 2012 the company "Wooly World" was developing rapidly, increasing its assets and sales by more than three times, but it did not cope with a more rapid growth in expenditures (more than 8 times) and eventually in 2012 products' sale was with loss -2171 EUR, and the final financial result under the influence of other expenses for the year (mainly administrative ones) made a loss of 5990 EUR. In 2012 "Dizz" Ltd experienced the growth rate of its net turnover (171 %) higher than its asset growth (124%), out of which it might be suggested that the asset turnover increased, which would increase the cash inflow and solvency. However, this did not happen, as the company's products were sold at prices below the cost of the production, as the result, the sale's loss constituted (-9296 EUR) in 2011 and in 2012 it even increased by 113% up to -10494 EUR. The activity of "Ziedot.lv Social Enterprise" Ltd was also

unprofitable. In 2012, the company managed to increase its sales by 151%, but the amount of the assets declined, which in the future might mean a reduction or change in the company's activities. Thus, the executed analysis of the factors influencing the profit of the companies showed that all three companies were able to increase their sales volumes, which might indicate on their market potential, presence of demand for the products, but none of them ensured a balanced growth of net turnover and cost of products, as expenses grew faster than profit did, which led to the losses from sales. Eventually, the losses surged even higher under the influence of other household (administrative) costs.

While assessing the level of a company's financial sustainability, it is necessary to consider its "age", in other words, the company's development phase and corresponding distinctive characteristics for each phase. Thus, according to the theory of life cycles (Adizes) at the initial phase of the development (age "infancy") the typical problems are: the lack of funds, frequent crises, losses. Obviously, high and stable financial indicators (efficiency, sustainability, liquidity) begin to form during the later phases of the development (age "youth" and "flourishing"). Looking at the "age" of the analyzed companies, and "Wooly World" Ltd (started its business activities in spring 2011) and "Dizz" Ltd (started its business activities in autumn 2010) were at the initial phase of their development, with typical mistakes and financial problems. "Ziedot.lv Social Enterprise" Ltd may be considered as the most experienced enterprise, which was established in June 2009 on the basis of a charity foundation "Ziedot" and which has been operating in the area of charity projects' implementation since 2003. The experience in the mentioned field, as well as more rationally formed capital structure as a result have ensured a satisfactory financial sustainability and solvency of the this enterprise.

The task for further research might be the analysis of social enterprises financial instability's causes and the elaboration of certain recommendations for the support measures' provision from the government, public and commercial organizations.

5. CONCLUSIONS

1. At present, there is no exact definition of a hybrid social enterprise. According to the authors, to hybrid social enterprises may belong only those enterprises that have a social mission, regardless of their legal form, and use business methods to achieve social goals, while, being oriented on receiving profit from commercial activities to fund social programs.

2. Social enterprises, which operate according to the market principles, can be financially sustainable and solvent. The increase of financial sustainability level depends primarily on the ability of an enterprise to generate profit.

3. In 2012, the losses from sales resulted in the decrease of financial sustainability's level of all three analyzed social enterprises. Those losses were caused by the following factors: rapid growth in production and sales volumes accompanied by the rise of production costs, which were unbalanced with income.

4. The presence of a significant amount of the initial capital for the business is an important prerequisite for maintaining financial sustainability and solvency of the enterprises that are particularly in need of funding at the initial stage of their development.

5. The main reasons for different levels of financial sustainability may be distinctions in business itself and its organization, in manufactured products and their purposes, in the actual positioning of social welfare beneficiaries in business processes.

6. Among the analyzed enterprises representing different types of hybrid SEs the highest and the most stable level of financial sustainability showed "Ziedot.lv Social Enterprise" Ltd (model 3).

6. RECOMMENDATIONS

1. At the establishment phase of a social enterprise it is necessary to prepare a detailed and qualitative business plan providing in it a sufficient amount of working capital for the initial phase to back up pessimistic development scenarios.

2. It is vital to conduct regular market researches of products, services and competitors to increase production and sales volumes, which are necessary to ensure sustainable and profitable business activities. Meanwhile, it is crucial to manage carefully expenditures of an enterprise, implementing operational financial planning of a business and preventing an uncontrolled growth of expenses.

3. It is necessary to develop skills in the field of entrepreneurship, both exchanging experience with other entrepreneurs, and generating theoretical background: mastering modern methods of marketing research, business organization and management, financial planning, etc.

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DESIGN A BUSINESS APPROACH FOR A HEATING AND ELECTRICITY COMPANY MANAGEMENT IN THE ASPECT OF SOCIAL RESPONSIBILITY

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The purpose of the conceptual paper is to start the discussion and create the awareness about the present situation in the energy sector. After the discussion about the present situation propose the necessity to design a new business model that will be socially oriented. Finally, opportunities for future research and critical questions will be discussed. In the article mixture of quantitative and qualitative research methods will be used to have better understanding of the present situation and to propose critical discussion. Main focus of the article is on publication research.

1. INTRODUCTION

After performing the analysis of subject theme literature, including case studies, there has been found absence of a new solutions concerning the business models in the aspect of social responsibility. Most of the models are focused on profit maximisation. The situation in the business world is rapidly changing. There is increasing pressure on companies to become more socially oriented. Media, NGO, government agencies are among those who put under pressure the companies as external factor furthermore internal pressure is founded by company employees. Society expectations about the company activities and purpose have changed in past decades. Rising expectations from all stakeholders make companies to re-think their activities and work harder on value-added that they produce and offer. How to change company philosophy to do business?

It is often heart in the media or from respected specialists that to change the situation or to improve something: the solution is to change the business model. Moreover according to Yishay Spector (2011) new firms with new business models are threatening and replacing established companies and conventional ways of doing business. But what exactly is the business model?

2. BUSINESS MODELS

To have clear understanding it is necessary to identify common substances and features among various business model definitions. There is currently no general consensus on the meaning of the term ‘Business Model’ (Jansen et al., 2007). Besides the term Business Model is not yet fully defined and there is a well-documented debate on the business model definition. Business model is a term much used but seldom defined explicitly. A widely used definition says, “A business model describes the rationale of how an organization creates, delivers, and captures value (economic, social, or other forms of value)” (Kaplan 2012). Osterwalder defines a business model as ‘the firm’s logic for creating and commercializing value‘. He continuously suggesting that Business model investigation creates a full understanding of a business (Osterwalder & Pigneur 2002). Furthermore Magretta (2002) argues that the strength of a business model is that it tells a story about the business by focusing attention on not only what the key pieces of the business are, but also how they fit together. Beyond the story-telling function, Osterwalder et al. (2005) argue that business models can potentially be analysed, compared, prospected, designed and patented. Generally speaking, business models define how the pieces of a business fit together (Magretta 2002)

The terms 'business model' and 'strategy' are often used as synonyms. As Stahler (2002) pointed out mistakenly these two terms are used for referring to everything that is believed to give the organization a competitive advantage. Another difference between strategy and business models is

that strategy includes execution and implementation, while the business model is more about how a business works as a system. A practical distinction describes business models as a system that shows how the pieces of an organization fit together, while strategy also includes competition (Magretta 2002). By contrast, Seddon et al. (2004) distinguish between business model and strategy, defining the business model as an abstraction of a firm's strategy. Amitt & Zott (2001) believe that a business model can be related to the concept of value chains. Goethals suggests that companies can gain advantages from identifying and improving elements in their Business Model that are not sufficiently optimized or aligned.

In fact most authors focus on the value proposition or the revenue model. While these may be the most important and the most easily identifiable aspects of some company's business model if financial aspects are compared however we believe that in modern world other elements are equally important and one of them is social responsibility.

Many authors have suggested that business model has the link with the value. So what is the value for the modern companies? This is the topic for the discussion.

3. CORPORATE SOCIAL RESPONSIBILITY

The world is not static and all the processes in the environment whether it is business environment or any other are dynamic and developing very rapidly in the era of globalization and turbulence. (Rugman 2006) As there are no clear boundaries that divide one variable from another; corporate social responsibility,

Corporate social responsibility concept was first developed in the beginning of the 70s in the last century. Nevertheless different scholars and researchers are still arguing about the concept new tendencies have appeared and strategies have developed that shows that the concept of corporate social responsibility is still actual in nowadays and companies have to be aware of it.

Similarly to business models there are different definitions of the term, social responsibility, corporate social responsibility, corporate citizenship, corporates social performance, stakeholder management etc.

In this article we will focus on Corporate Social responsibility term two opposite views are presented. We start with The World Business Council for Sustainable Development defines CSR as:

"The continuing commitment by business to behave ethically and contribute to the economic development while improving the quality of life of the workforce and their families as well as of the local community and society at large."

As we continue with one of the most famous opponent to corporate social responsibility Friedman (1970) theory, well known view that 'the only one responsibility of business towards society is the maximization of profits to the shareholders within the legal framework and the ethical custom of the country'. In addition Windsor (2001) have recently stated 'a leitmotiv of wealth creation progressively dominates the managerial conception of responsibility'

Another very important issue is what are the evaluation criteria's? If we talk about the new business model there have to be measurements how to evaluate the business model and its value added to social responsibility. One of the options is to use Carroll (1991) 'Pyramid of the levels of CSR' which presents 4 levels of Corporate Social Responsibility. First level bottom of the pyramid is 'companies which play by the rules of the game' (Friedman's CSR), second level is 'outwards responsible companies (shallow CSR actions)', third levels is 'entrepreneurs for others (deeper CSR)' and finally fourth level 'the really responsible companies (blue marketing)'. What could be the other options and alternatives to evaluate the effectiveness and efficiency of companies performance according to social responsibility?

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4. SITUATION IN THE WORLD

To understand the current situation and the need for social responsibility in the energy sector growth article presents small insight of different opinions and views from the media of how the situation in the industry will develop. Energy industry is vital for every country; on the macro level main agenda is energy independence, energy security, 'green energy', global partnership among producers and so on. However these are not the only tasks, energy availability and affordability are the emerging trends that government leaders have to deal with. Our everyday life at home, rest, work and production cannot be imagined without the use of energy. Organization of our life, national economy and welfare is largely dependent on decisions in the field of energy policy. Energy prices are very important for successful development. For organizations, energy costs are a factor to be reckoned with, especially for SMEs. Costs for heating and lighting make out a significant part of any household's budget. Energy consumption continues its increase both in the world and Latvia, and it is most likely that it will also continue to grow. It is anticipated that, without performing any measures, by 2050 global energy consumption could increase even by 3.5 times. In the last four years, European electricity costs have spiked 17% for homeowners and 21% for industry, according to the Institute of Electrical and Electronics Engineers. The situation is most acute in the U.K., where one in six households was spending more than 10% of its income to "maintain adequate warmth" in 2011, according government statistics cited by Reuters' John Kemp. According to the Household Energy Price Index for Europe, Berlin becomes the place with the most expensive electricity in Europe followed by Prague and Lisbon. Meanwhile, Helsinki has the cheapest electricity followed by Stockholm and Paris. The price customer's pay per kilowatt-hour (kWh) of electricity varies by as much as 127% across these 23 countries. In September, Berliners paid an average of nearly $0.40 per kWh of electricity they purchase from the local power grid. To put this in perspective, the highest average electricity price in the continental United States is about $0.18 per kWh in Connecticut, according to the Energy Information Administration. Energy bills are forecast to continue increasing throughout the remainder of the decade, which is likely to see rent and utility bills become by far the single largest item of household expenditure. Reuters' Karolin Schaps and Barbara Lewis write that much of the increase is related to the cost of complying with the continent's ambitious carbon emissions targets. The European Union is supposed to cut emissions to 20% below 1990 levels. The change will be expensive. Infrastructure improvements are also set to come with a $1 trillion price tag through the end of the decade, Reuters says. "The cost of funding government policies for renewable energy, social support and energy efficiency is increasing faster than any other part of an energy bill," Paul Massara, chief executive of RWE npower told Reuters. The chief of Italian oil giant Eni recently called the situation an emergency and warned Europe's lack of competitiveness was costing investment in continental industry. Besides, it is not the level of electricity and gas prices that is relevant but the pace of change, and European's bills are rising fast in an economic climate where average earnings have stagnated. Households can only pay rising bills by cutting back sharply on other areas of expenditure. It is very sensitive topic for Latvia because Latvia has the third lowest minimum wage in the European Union (EU). Only Bulgaria and Romania have smaller minimum wages, according to data by the EU statistical bureau Eurostat, writes LETA. Nevertheless minimum wage in Luxembourg is 11.5 times higher than in Romania. It clearly shows inequality in Europe. As a result, there's talk of putting climate goals on hold to help bring costs down.

In addition situation in Latvian energy sector is rather complicated. Despite the fact that Latvian electricity market is open for abroad companies there is still only one big player in the market and it is A/S Latvenergo. According to web-portal 'Enerģētika Latvijā', 92% of electricity capacity generated (in numbers 2022MW) in Latvia is owned by A/S Latvenergo. From this capacity 60,12% consists of the 'Daugavas HES' cascade, 39,33% Rigas thermo-electro station (TEC-1 and TEC-2), 0,47% Liepājas TEC and 0,08% Ainažu wind power station along with Aiviekstes hydroelectric power station. A/S Latvenergo produces almost 54% of the total amount of electricity consumed in Latvia. Lack of market liquidity, or too few players in a small market does not provide

a favorable environment for competition, thus creating a monopoly risks that could potentially affect the security of supply and price volatility. According to newspaper ‘Diena’, ‘Ir’ and ‘Dienas bizness‘ data A/S Latvenergo profit in comparison with last year has grown by 2% reaching 44,7 million lats (63,5 miilion Euros).

How can companies be socially oriented and still be profitable with potential economic growth, is the key question?! Triple-Bottom-Line approach helps companies to achieve a balance of economic, environmental and social imperatives and not compromising expectations of shareholders and stakeholders. Greater democracy and citizen involvement in decisions are crucial to achieve the planned goal. The basis for corporate social responsibility and business model can be found in the will to change developmental attitudes, both individually and institutionally.

In other words corporate social responsibility as part of a new business model generates new and competitive resources for firms in addition to a properly implemented corporate social responsibility concept can bring along a variety of competitive advantages, such as: enhanced access to capital and markets, increased sales and profits, operational cost savings, improved productivity and quality, efficient human resource base, improved brand image and reputation, enhanced customer loyalty, better decision making and risk management processes. All the benefits listed above are from company perspective. However there could be many potential benefits for end-users as well. If the tariffs for the energy could stay at one level, it will bring certainty to the market and it could help to attract new customers and further investments for developing new businesses in the area. With increase of energy end-users, energy producers could achieve the economy of scale, that change will also lead to new working places not only in the field of energy production but also for all the companies that require large quantity of energy in their production. It could potentially be win-win situation for both parties, energy producers and end-users.

5. CONCLUSIONS

To summarize there are still a lot of open questions that have to be carefully analysed before they could be answered. As article shows accurately integrated corporate social responsibility could generate many benefits for the company however to do that it requires change and flexibility from the company and the management team. So what are the reasons for change? What benefits companies are searching for? With what kind of pressure companies have to deal at the present and in the near future? At what stage of company life cycle the change is most effective? What is the external and internal influence that pushes company to integrate corporate social responsibility in their business model? What are the requirements for companies to be better prepared for the upcoming developments in energy sector? It is impossible to know all the answers; instead it is crucial to ask the right questions. The situation in the business world is changing rapidly and companies have to be aware of changes and have to be ready and prepared to face the future uncertainty. Change is inevitable, so why not to focus on socially oriented business model. As article have shown social responsibility can bring many benefits to the companies in addition by analysing business models company managers can better understand the company processes and evaluate process efficiency. With all that information managers become better prepared for the change. By integrating the social responsibility in new business model companies can achieve synergy. As it was presented in the article: social responsibility integration to the new business model brings the benefits not only to energy producers but also for end-users.

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THE DEVELOPMENT OF THE SELECTED ORGANISATIONAL ECOINNOVATIONS – A CASE STUDY OF POLISH ENTERPRISES

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Abstract

The subject of organisational ecoinnovations is a new one and has not yet been thoroughly examined. What constitutes a research problem is an attempt to answer the question whether, how and why the significance/number of the certifications of the systems ISO 14001 changes; which are an example of organisational ecoinnovations in the selected countries (with particular regard to Poland) over the last few years. An endeavour has been made to depict to what extent the changes connected to organisational ecoinnovations ensue from strategic thinking. It has been determined that, in spite of the crisis, the number of the organisations that implement and certify formal organisational ecoinnovations has been systematically increasing. In the times of thriftiness, the ecology-oriented management basing on systemic approach to innovation can be a source of process, product and marketing ecoinnovations, contributing to the improvement of the competitive position of an enterprise. In the paper there has been described the origin of entrepreneurial and innovative development strategies, which contributed to the development of the formal Environmental Management Systems as organisational ecoinnovations in Poland. There have been presented the changes in the motives concerning the implementation of the selected organisational ecoinnovations which occurred in the last decade. There have been also presented the instruments of supporting the development of formal organisational ecoinnovations in Poland from EU funds. The analysis conducted for the purpose of the paper compriseexternal secondary domestic sources as well as external secondary foreign sources. Furthermore, desk research was conducted. The author referred not only to the information included in the databases of the International Organization for Standardization but also to the research results of other authors. There have been also presented the results of her own research conducted by means of the method of in-depth interviews in Polish enterprises. The article constitutes another part within the scope of the cycle of the publications regarding organisational ecoinnovations and constitutes a case study referring to Polish economic realities. The results of the present paper can attract the interest of the subjects that are considering certification of organisational ecoinnovations (with regard to the market changes) as well asthe interest of consumers, since they can better understand the nature of organisational ecoinnovations as the solutions that join economic, ecological and social aims.

Keywords: organizational ecoinnovations, environmental management system

1. INTRODUCTION

In Poland, in the period of the domination of the system of centrally planned economy, there were no particular external or internal incentives that would stimulate the implementation of systemic ecology-oriented solutions. The major focus was on the solutions aiming to remove the effects of environmentally unfriendly actions. The issues connected to the protection of the environment were treated as additional expenses. Thus, an attempt was made only to satisfy legal requirements. Only after thetransformation of economy, which in Poland took place in 1998, the aims of the functioning of enterprises were re-established.It was influenced by the development of civil society, developing globalization processes, the issues connected to business self-regulation and increasing demand related to the export policy. The obligations ensuing from Poland's accession to the EU in 2004 caused that the issues connected to the practical realisation of voluntary, ethically-desired systemic activities of enterpriseshave become the object of interest of the researchers. Their essence is that they exceed the established legal requirements according to the concept of Corporate Social Responsibility.

The role of Environment Management System (EMS) is supplementary in relation to such instruments of direct influence of environmental policy of a given country as administrative decisions or permits. In the literature on the subject, it is emphasised that those systems should be treated as supplementary instruments of social interactions (Ejdys at al., 2012). Within the scope of the realisation of the concept of sustainable development, what is important apart from economic profit is social profit and respect for natural environment. Ecoinnovations can serve as one of the additional tools in practical realisation of generating the triad of ecological, economic and social benefits.

'Ecoinnovations can be defined as deliberateconduct characterised with entrepreneurship, comprising the stage of designing a product and its integrated management throughout the entire cycle of life, which is conducive to proecological modernisation of the societies of the industrial period, due to that fact that ecological issues are taken into account during the preparation of products and the processes related to them. Ecoinnovations lead to integrated solutions aiming to decrease the amount of resources and energy, and simultaneously increase the quality of a product or a service'. (Carley, Spapens, 2000).In the context of determining the most popular types ofthe ecoinnovations being implemented, interesting analyses are presented by E. Kijek. He conducted research on a randomly selected sample consisting of 5222 representatives of management staff of small and medium enterprises from 27 countries. The results indicate that the most frequently declared type of implemented innovations were new solutions of processing nature. In this kind of innovations, the most active enterprises came from Poland, Malta, Luxemburg, whereas the slightest inclination for this type of innovations showed companies from Hungary. The highest percentage of firms introducing organisational ecoinnovations was indicated by the subjects from Poland and Luxemburg (Kijek, 2013). In this context, the analysis of Polish experiences is particularly justified.

The scientific considerations on the role and significance of ecoinnovations in economy provedthat they are very important issues. They are significant not only in the context of satisfying the assumptions of eco-development but also the realisation of EU's proecological policy. The aim of the hereof paper is to present the development of the selected type of organisational ecoinnovations in Poland and the selected countries. The subject is of great significance since the support for the development of innovations (in particular ecoinnovations) is one of the priorities in the context of the future competitiveness of Europe. Owing to editorial restrictions andauthor's research possibilities, in the article there has been presented the development of formal globalEnvironmental Management System (EMS) basing on the requirements of the ISO 14001. According to the definition presented in the cited EMS standard, it is the part of the management system of an organisation which is used to prepare and implement "made-to-measure" environmental policy and the policy of managing the environmental aspects of an organisation. Therefore, EMS comprises organisational structure, planning, responsibility, practices, procedures, processes and resources. In the literature on the subject, the system in question is ranked among organisational ecoinnovations (Kesidou, Demirel, 2012).

2. THE ORIGIN OF FORMALISED ORGANISATIONAL ECOINNOVATIONS

Before the establishment of the universal, global model of dynamic environmental management basing on the ISO 14001, some countries applied their own standards, e.g., UNE 77-801 in Spain, NF X30-200 in France, BS 5750 in the UK – which has been a pattern for the later standards from the series ISO 9000 (Dulewski at al., 1998). The first standard concerning the programs of environmental management –BS 7750 – was introduced in the UK in 1992 (Pochyluk at al., 2005). The EU and global integration processes entailed the necessity of undertaking work to standardise domestic solutions to make them likewise applicable in other countries.

In 1993, the International Organization for Standardization constituted Strategic Advisory Group on the Environment (SAGE)and there was created Technical Committee(TC) 207. In 1996, basing

on British standard BS 7750:1992, it approved, inter alia, the following international standards (Poskrobko, 1998), (Łopata and Krawczyk, 2001):

- ISO 14001:1996 -EMS – the requirements and guidelines on application;
- ISO 14004:1996 - EMS – general guidelines on the principles, systems and supporting techniques;
- ISO 14010:1996 - the guidelines for environmental auditing (EA; general principles);
- ISO 14011:1996 - EA - audit procedures, the auditing of environmental management systems;
- ISO 14012:1996 -EA - qualification criteria for environmental auditors.

In 2003 and 2004, these standards were updated. The standards ISO 14010-14013 were replaced with one standard – ISO 19011:2003 – Guidelines for quality and/or environmental management systems auditing. Due to the necessity of preparing standardised guidelines for the auditing of various systems, this standard was updated anew to ISO 19011:2011 'Guidance on auditing management systems'. Polish language version of this standard appeared in 2012. The standards that were also updated included ISO 14001:1996 and ISO 14004:1996. Another version of the standards ISO 14001:2004 and ISO 14004:2004 were published on September 15, 2004. In Poland these standards are in force from May 2005. The standards constituting the guidelines for building, improving and certifying environmental management system, to make it compatible with other management systems, are planned to be updated in 2015.

Almost simultaneously with the environmental management system basing on the international standard ISO 14001, in 1993 there was issued the Regulation 1836/93/ECC of the Council of 29 June 1993 concerning voluntary participation of industrial companies in ECO-Management and Audit Scheme (EMAS) in the Community. In 2001, this regulation was updated in such a way that it comprised the activities of various types of organisations and became more restrictive in requirements than EMS built according to the guidelines of the ISO 14001. Presently, in Poland the third version of EMAS is in force, i.e. EMAS III – The Regulation No 1221/2009 of the European Parliament and of the Council (EC) of 25 November 2009 on voluntary participation of organisations in ECO-Management and Audit Scheme. It constitutes a response to the changing needs of the market. The functioning of EMAS in Poland is particularly determined also by the Act of the law of 15 July 2011 on domestic ECO-Management and Audit Scheme (Dz. U. Nr 178, poz. 1060) and secondary legislation.

The implementation of EMS on the basis of the requirements of the international standard ISO 14001 became a way of bringing enterprises closer to the registration in the far more exacting EMAS system. According to the data of the General Directorate for Environmental Protection in Poland, on 23 April 2014, 45 organisations were registered in ECO-Management and Audit Scheme (Dworak, 2014).

The increase in the popularity of organisational ecoinnovations illustrated with the example of the ISO 14001 in Poland

The first companies that implemented and certified the ISO 14001 in Poland were the enterprises connected to western capital at the so-called "request" of the mother-concern (Darnall, 2006). Such a situation occurred in the case of the company RautaruukkiPolska Sp. z o.o. This company, a branch of the largest producer of steel solutions in Europe – a Finnish concern RautaruukkiOyj, implemented its environmental policy as an integral element of its activity (Ekopartner, 2001).

The second group comprised the companies with domestic capital which closely cooperated with foreign contractors. For instance, Polish FabrykaKabli „Ożarów" S. A., which, since 1994, possessed the Quality Assurance System compliant with the ISO 9002. In 1997, as a result of the increasing demands of the clients, the company implemented (in every area of activity) and certified EMS according to the ISO 14001.

The organisations which, most frequently, are partners in a supply chain, responded to more and more distinct inclination of the international companies to define their environmental policy in such a way that it satisfies the demands in the international market (Rugman and Verbeke, 1998).

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The third group that implemented organisational ecoinnovations in question constituted the organisations that had already possessed the certificate, which had been required by the ISO 9001. Those enterprises decided to build integrated management systems (Oleszkiewicz, 2001).

In 1997, 8 companies operating in Poland possessed the certificate of the compliance of their EMS with the ISO 14001. The first was KoksowniaHutyCzęstochowa. Ten years later, at least 1599 organisations possessed the certificate of membership to the "elite club". It is noteworthy that also the organisations which possess EMS certificate according to the ISO 14001name themselves the "elite club" (Rybaczewska-Błażejowska, 2005). According to the service for the experts on environment protection – eco-net, in Poland, in 2009 (as for: October 2, 2009) 1701 organisations possessed EMS implemented and certified in compliance with the ISO 14001. By comparison, according to the information obtained from Polish certifying organisations and voluntarily sent to the above-mentioned website (www.eko-net.pl), the number of EMS certificates in 2012 amounted to 2165 (as for: October 12, 2012)[1]. The information concerning the number of enterprises in which the EMS compliant with the ISO 14001 functions without certification cannot be obtained. The dynamics of the changes regarding the number of the certificates in Poland is depicted in figure 1.

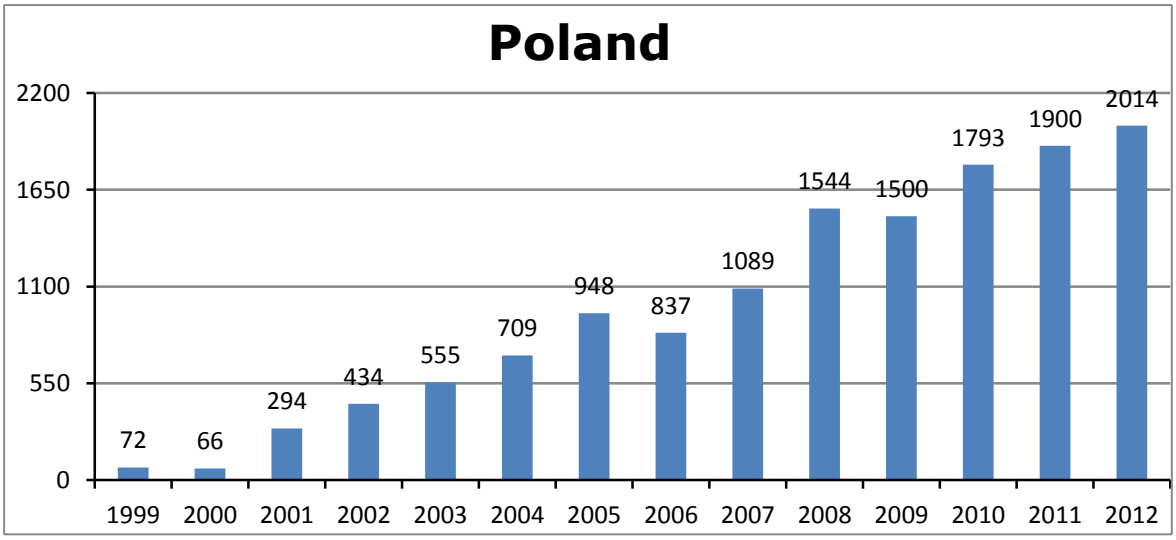

Figure 1. The number of the certificates ISO 14001in Poland in 1999-2012
Source: Self-elaboration on the basis of the data from: The ISO survey – 2012, ISO Central Secretariat, ISO, Geneva, available at: http://www.iso.org/iso/home/standards/certification/iso-survey.htm
Notice: The official data for 2013 have not been published yet (as for: June 20, 2014).

According to the data of International Organization for Standardization, the number of the domestic organisations that confirm their formal environmental management systems with the ISO 14001 has been gradually increasing (fig. 1). Even the economic crisis has not negatively influenced this tendency. In the opinion of some observers, 'in Poland, standards are treated as a further step Europe makes to increase competitiveness. Hence, EMS are implemented with a view of obtaining the certificate, however, they are treated as the so-called euro-bureaucracy'[2]. It is confirmed by lack of strategic approach in the case of the majority of enterprises, and the fact that the proecological management form that has been declared functions only in theory. It bears its consequences, which become visible during the analysis of the effects

[1] http://eko-net.pl/baza-wiedzy/certyfikaty.html [retrieved: March 2, 2014]

[2]http://www.holtec.com.pl/press.htm [retrieved:October 2, 2009]

ofEMS implementation and certification in the context of seeking the source of ecoinnovations, eco-efficiency and eco-effectiveness (Hajduk-Stelmachowicz, 2013 a).

In Poland, in 16 administrative regions, the number of the organisations that possess the certificate ISO 14001 is considerably diversified. What influenced such vast disproportions are industrial history and the level of economic development of a particular region. What is also significant is the level of industrialisation and geographical features(e.g., the participation of agricultural lands and forest area in a region).

While determining the causes of low level of the certification ISO 14001 in Poland, J. Ejdys examined (in the second quarter of 2000) 35 enterprises. 75% of the respondents of the analysis under discussion stated that the low level of interest in the implementation of the ISO 14001 ensued from lack of encouragement from the state, 58% of the questioned affirmed that the issue of environmental protection is treated in companies as a minor one. Half of the interviewed drew attention to too high costs of implementing EMS (incommensurate with the benefits). 33% of the respondents pointed to the insufficient levelof managers' ecological awareness, and 21% of them indicated the conservatism of the management as one of the causes (Ejdys, 2001).In this context, the results of the research conducted by the author after the period of 10 years are even more interesting. The in-depth interviews conducted in the enterprises from Podkarpacie Region in Poland unambiguously show that for 74% of the examined companies, the fundamental motive for the implementation and certification of EMS in consistency with the ISO 14001 were the expectations of the clients and contractors, who constituted the following links in the supply chain (e.g. within the scope of outsourcing). It is worth emphasising that neither contractors nor clients expected from the companies to be shown the ecological, economic, or social effects. The certification (by an independent third party) that a given enterprise functions in compliance with the requirements of the international standard ISO 14001 was satisfactory for them.Such certificates are expected from Polish exporters by the contractors from Germany, Denmark, Norway and Switzerland. 69% of the enquired as a motive for implementing and certifying EMS indicated the care for the environment. For 62% of the questioned it was important to increase employees' proecological awareness. The remaining motives for EMS implementation and certification which were indicated by the representatives on EMS comprised: the concept of the continuous improvement (55%), enhancement of company's credibility (50%), the adopted strategy of organisation's development (43%),increase in competitive advantage (40%), compliance with legislation (38%), material and energy saving (38%), the development of the ISO 9001 (26%), increase in the export possibilities (26%), increase in the participation in the market (24%) (Hajduk-Stelmachowicz, 2013).

By comparison, what is worth quoting are the results of the research conducted in British companies. They indicate that 'firms adopt EMS because of regulatory, ethical believes and/or image concerns, but the decision to have it externally certified is mainly driven by their motivation to increase internal efficiencies' (Kesidou, Demirel, 2012). The differences in the approach toEMS implementation and certification can ensue from completely different historical and economic backgrounds and, particularly, the organisational culture presented not only by the companies from the former socialist countries but also the enterprises from the so-called "West of Europe". Such an approach can also be a sign of greater organisational maturity of the enterprises from the UK. In the organisations that are characterised by a high level of organisational culture, there is created (and, more importantly, skilfully used) a wide knowledge repository, which enables the actual management of important processes. In those organisations, the management staff see the opportunities in external certification, e.g., in the context of seeking the elements of continuous improvement – according to the concept of the PDCA cycle.Basing on the origin of the development of the quality and environmental standards in the UK, it can also be presumed that the quality of work of the certifying units there is high. Thus, the certification of an independent party constitutes a measurable addedvalue for the management of the companies from the UK. It is significant from the viewpoint of operational management as well as strategic management. Independent audits of the third party enable the management of enterprises to answer the questions:

whether the organisation is heading in the right direction, in what way the organisation manages risk, what actions are undertaken by external and internal clients to assure business continuity, to what degree employees identify themselves with the values the management of the company claim to hold.

It has to be indicated that the EU support for financing innovative proecological solutions in Poland was of relatively slight significance for the development of the EMS certification in the ISO 14001 (Hajduk-Stelmachowicz, 2012). There are some premises that enable the statement that in some instances the subsidies were granted to the enterprises for which the fact of certification confirming the compliance with the requirements of the ISO 14001 was only an operation/activity within the scope of Public relations/marketing. One should be aware that in the part of the enterprises functioning in different countries the certification of EMS can only signify the so-called cosmetic changes in the functioning of an organisation. For this group of enterprises organisational ecoinnovations constitute only a source of additional expenses and the certification is perceived as a form of greenwashing.

In 2007-2013, Polish Ministry of the Environment implemented the Operational Programme Infrastructure and Environment within the scope of which enterprises could apply for a subsidy for the implementation and certification of formal EMS[3]. In this case, it was possible to receive horizontal aid, which was provided for strictly ecological activities and within strictly ecological expenses. Such aid aimed, among others, at the adjustment of some environmental standards, the application of the best possible techniques and the investments serving the decrease in the consumption of energy.In contrast to regional aid, it was possible to support the undertakings which are not new investments. It was accepted that small, medium and big enterprises (excluding the enterprises covered by the regulationno 1198/2006 of the Council (EC) of 27July 2006 on The European fisheries fund, and the enterprises covered by the regulation no 1698/2005 of the Council (EC) of 20September 2005 on the support for the development of rural areas by European Agricultural Fund for Rural Development) could apply for funds. In the context of the implementation of organisational ecoinnovations, enterprises could use the Priority IV of the Operational Programme Infrastructure and Environment – in particular the Activities '4.1. The support for environmental management systems'. It enabled receiving funds for non-investment under takings, comprising, particularly, the activities that lead to the implementation of EMS in compliance with the ISO 14001 and/or the regulation of EMAS, as well as on the certification of eco-labels, which can be obtained on the basis of ecological attestation criteria.

The decree of the Minister of Environment of 8January 2009 on granting de minimis aid for the support for environmental management systems within the scope of the Operational Programme Infrastructure and Environment indicated that the funds could be allocated particularly for (Dz. U. nr 9, poz. 55):

- financing the diagnostic activities that are necessary for the assessment of the functioning of a research enterprise, aiming to determine the possibilities of implementing EMS;
- external expert services aiming to develop the competences that are necessary for correct implementation of EMS;
- drafting the documents serving the implementation of EMS in an enterprise;
- conducting audits and verifications connected to the procedure of granting EMS certificate;
- the registration of an enterprise in the eco-management and audit system (EMAS);
- drafting and publicising environmental declaration and information materials required from the enterprises registered in EMAS;
- conducting research and audits that are necessary for obtaining certified eco-labels for eco-friendly products;

[3] http://www.nfosigw.gov.pl/site/main/podstrony_bis.php?id=1215089324 [retrieved: May 30, 2014]

- drafting documents, including research reports and other necessary information that are filed in the organisation that grants the signage;
- the expenses connected to the obtainment of certified eco-labels that have to be covered for the benefit of the organisation granting the signage.
- trainings and consulting necessary for the obtainment of certificates/registration;
- paying the costs of the certification/registration itself.

'The maximum value of the subsidy from EU funds could constitute (after the realisation of the project was completed) 50% of the qualified expenses, however, it did not exceed PLN 400 000, and the entire value of the aid (also from sources other than Operational Programme Infrastructure and Environment) could not exceed € 20 000 (or € 100 000 – in the case of the transport sector) in the period of the current calendar year and two previous calendar years. This condition did not concern a single project but the entire enterprise. It ensues from the fact that the subsidy within the scope of the activity 4.1 is granted within de minimis aid. Therefore, it should be consistent with adequate principles, according to which an enterprise can be granted the aid (from different sources and for various projects)as long as the value of the aid in total does not exceed the above-mentioned threshold in a given period. The minimum value of the project subsided form EU funds constitutes PLN 8 million (in the case of supporting small and medium enterprises)'[4].

While analysing the information concerning the number of the certificates in Poland as well as in the world, one has to bear in mind that these data are only the estimation. In Poland, the estimate concerning the number of the certificates being issued is gathered by the service for the experts on environmental protection – www.eko-net.pl. On the global scale, the data on the number of certificates are gathered within the scope of the online service of data exchange by ISO (International Standard Organization[5]).Every year, the organisation prepares a report (basing on international survey data) on the number of the certificates of compliance with particular standards concerning management that are issued in the world. The data for the ISO report are provided by accreditation body, associated in IAF (International Accreditation Forum) and the certifying units it accredits. Till the end of 1999, at least 13019 certificates confirming that an EMS is compliant with the ISO 14001 were issued in 80 countries. The recent available data concerning EMS certification indicate that 285844 organisationsfrom 167 countries of the world possessed (in 2012) a valid certificate ISO 14001 (fig. 2).

[4] http://www.nfosigw.gov.pl/site/main/podstrony.php?id=1212478382 [retrieved: May 30, 2014]

[5]http://www.iso.org/iso/home.htm[retrieved: May 30, 2014].

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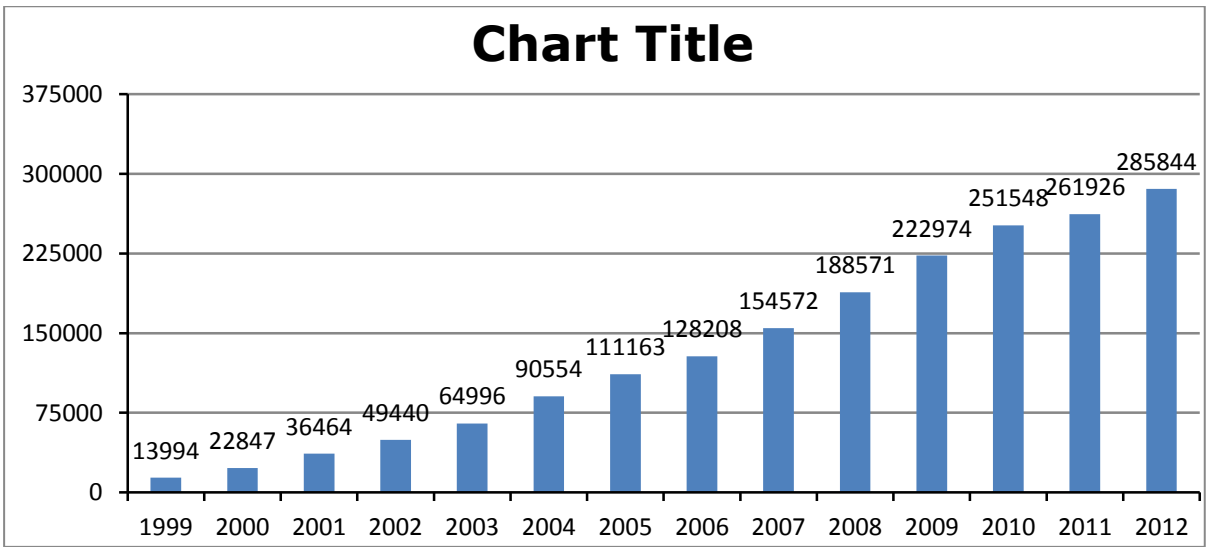

Figure 2. The number of the certificates ISO 14001 in the world in 1995-2012
Source: Self-elaboration on the basis of the data from: The ISO survey ISO 14001 Certificates 2012, (survey data) available at:http://www.iso.org/iso/home/standards/certification/iso-survey.htm
Notice: The official data for 2013 have not been published yet (as for: June 20, 2014).

Globally, there was reported a 9% increase in the number of the certificates ISO 14001 as compared with 2011. The certification in 2012 was reported in another 9 countries in comparison to the previous year. The results of the data analysis (fig. 2) confirm that, globally, there is registered a constant increase in the interest in standardised EMS, i.e. organisational ecoinnovations. The ten leading countries with the most intense dynamics of the increase inthe number of the certificates in 2012 (as compared with the previous year) comprise: China, Spain, Italy, Romania, Germany, Denmark, USA, United Kingdom, Argentina, and Bulgaria.

The number of the certificates ISO 14001 in Poland still constitutesonly a quarter of the certificates ISO 9001. It has to be noticed that in the future, it is highly probable that the difference between the number of the ISO 9001 and ISO 14001 being issued will decrease. The results of the data analyses obtained within The ISO Survey of Certifications 2012 [6] indicate a rising trend concerning the implementation of formal EMS and falling trend as regards the general quality standard confirming the compliance with the requirements of the ISO 9001. In the opinion of P. Grudowski and E. Tymoszuk, the role of the certified quality management systems in building competitive advantage declines; they have been substituted with the systems dedicated to particular economic industries and sectors (Grudowski and Tymoszuk, 2014).

In 2012, the leading position among 10 countries with the highest number of the certificates being issued (91590 items) was occupied by China. It has to be noticed that from 2004 to 2006 this country had the second place in the global rank (Cushing, at al., 2005). By comparison, in 2006 in China there were 18842 certificates issued, and the number in 2007 reached 30489[7]. Japan ranked second as regards the number of certificates confirming the compliance of EMS with the requirements of the ISO 14001.In this country, EMS basing on the requirement of the ISO 14001 was first introduced in 1995. In 1998, the number of the certificates being issued amounted to 1395, and in 2002 it reached 10000 (Hibiki, Arimura, 2004). It was Japan to be the world leader as regards the number of the certified formal EMS implemented in organisations. Since 2007, China has been occupying the leading position.In 2012, in Japan there were issued (according to The ISO

[6] The ISO Survey of Certifications 2012, Geneva 2013 [retrieved from: http://www.iso.org]

[7] Self-elaboration on the basis of the data from: *The ISO survey*.

Survey of Certifications 2012) about 27774 certificates confirming the compliance of the functioning EMS with the requirements of the international standard ISO 14001. What is interesting form the viewpoint of a researcher is whether the motives for the implementation and certification of organisational ecoinnovations, namely EMS that are built on the basis of the ISO 14001, are the same in the two countries in question. If the motives for the implementation, functioning and certification of organisational ecoinnovations in these countries are different, what this difference in the approaches to EMS implementation, functioning and improvement is caused by, in the context of generating economic, ecological and social effects.

3. CONCLUSION

In the literature on the subject, inter alia, R. Kemp draws attention to the fact that: 'for most people eco-innovation is another term for innovation for the environment, and includes environmentally-beneficial innovations which are not environmentally motivated' (Kemp, 2010). The perspective of funding from EU budget (Europe 2020) bases on the concept of rewarding the initiatives that are innovative and that are built in accordance with the concept of sustainable development. Incontrovertibly, the EMS that are "made-to-measure" and built on the basis of the requirements of the ISO 14001 can contribute to the improvement of the effectiveness as well as successfulness of systemic activities undertaken by various types of organisations. There arise the questions whether the subjects which have certified formal EMS should be additionally rewarded (e.g. during tenders realised with respect to the green public procurements) and whether the certificate of functioning of the analysed system can be accepted as a sufficient proof that an enterprise undertakes innovative and proecological initiatives. The persons that can soon face such questions are the employees of the administration who will assess the projects and grant funds from the EU budget in 2014-2020.

In the view of the forthcoming twentieth anniversary of the implementation of the first standards of the international series ISO 14001, the aspects that are worth analysing globally, are the motives, results, expenses and benefits from the implementation, functioning and improvement of the certified organisational ecoinnovations from the viewpoint of economy, ecology and society in particular countries of the EU, in micro-, meso- and macroeconomic perspective.

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WHAT DOES THE GLOBAL COMPETITIVENESS REPORT 2013-2014 INDICATE ABOUT ENTREPRENEURS IN LATVIA?

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Abstract

The Global Competitiveness Report is based on twelve pillars which are grouped in three categories. Pillars 1 to 4 which comprise institutions, infrastructure, macroeconomic environment and health and basic education, form factor driven economy. Efficiency driven economy covers pillars 5 to 10 which include higher education and training, efficiency of goods and labour market, financial market development, technological readiness and market size. Finally, pillars 11 and 12 which cover business sophistication and innovation, are key factors for innovations driven economy.

Brief overview on each of the pillar is provided in the article. All pillars are interconnected and they supplement each other. Countries participating in the GCR survey are grouped in five categories i.e. factor driven economies (stage 1), transition from stage 1 to stage 2, efficiency driven economies (stage 2), transition from stage 2 to stage 3 and innovation driven economies (stage 3). Methodology of the GCR is based on quantitative data which are collected by the Central Statistics Bureau of the respective country, and qualitative data which are obtained from the survey completed by the senior management of companies. Companies which participate in the survey are selected based on a number of criteria including structure of the GDP of each country, definite proportion of new companies and those which previously participated in the survey, and others.

Analysis of data reveals that Latvia excels in terms of well-functioning legal rights index, low inflation, good basic education, relatively good education in STEM subjects, provision of internet access for schools, high number of mobile broadband subscriptions, favourable trade tariffs, relatively high proportion of female employment in the labour market, good quality of local producers.

Bureaucracy of the government, tax rates, access to financing, tax regulations and corruption can be listed as the most problematic factors for development of entrepreneurship in Latvia. There are several areas which needs to be improved and developed including establishment of efficient legal structure for settling disputes, increase of overall quality of the education system, government policy concerning attraction of new talents, increase of quantity of the local producers, availability of researchers and engineers.

Keywords: entrepreneurship, competitiveness, business indices, GCR

1. RESEARCH METHODS USED IN THE ARTICLE

The author in the paper uses comparison of most well-known indices in the world which analyse and assess entrepreneurial activities in the countries. The Global Competitiveness Report is described more in detail, and the description of the GCR structure and methodology is based both on information available in the report as well as on author's own experience as for a number of years the author has been involved in conducting the Executive Opinion Survey (EOS) and collecting qualitative data from senior managers of companies in Latvia. The assessment of the GCR importance for entrepreneurs in Latvia is based on figures presented in the report with explanations and remarks based on author's observations and discussions with different company representatives who have been involved in the EOS and/or were related to the GCR. Finally, the paper also covers information which was acquired during the telephone calls and conversations with the representatives from the World Economic Forum who are directly involved in preparation of the report.

2. OVERVIEW OF GLOBAL INDICES ON ENTREPRENEURSHIP

Entrepreneurship and entrepreneurial activities are analysed and evaluated in a number of national and international indices. The Global Entrepreneurship and Development Index (GEDI), Global Entrepreneurship Monitor (GEM), Doing Business and Global Competitiveness Report (GCR) are among most often referred and quoted global indices which cover also assessment of entrepreneurial activities in Latvia.

Global Entrepreneurship and Development Index (GEDI)

The GEDI index was developed in 2008 by professors Zoltan J. Acs and Laszlo Szerb and it covers more than 100 countries. The index covers both individual and institutional variables therefore, it is possible to reveal the multidimensional character of entrepreneurship. Indicators used in the index includes quantitative as well as qualitative measures (Acs et al, 2010, p.6). The entrepreneurial activity sub-index (ACT), the entrepreneurial aspiration sub-index (ASP) and the entrepreneurial attitude sub-index (ATT) evaluate important for entrepreneurship features more in detail. The above mentioned sub-indices and approach are consistent with the Global Entrepreneurship Monitor conceptual model. GEDI introduces also a new methodology Penalty of Bottleneck (PEB) which help to pinpoint constraints in the country for successful development of entrepreneurial activities.

Global Entrepreneurship Monitor (GEM)

The Global Entrepreneurship Monitor (GEM) is one of the largest global indices which analyses each country's adult population who is participating in entrepreneurial activities. GEM was developed in 1997 by researchers from the London Business School and Babson College (Amoros et al, 2013, p. 14). Already a decade the national team from Latvia is participating in this prestigious index quoted by a number of leading policy makers in the world.

The national team from each economy is responsible for the annual Adult Population Survey (APS) covered by a representative sample of at least 2000 adults and the National Expert Survey (NES). The National Expert Survey comprises at least 36 experts with four respondents representing nine entrepreneurial framework conditions i.e. financing, governmental policies, governmental programmes, education and training, research and development transfer, commercial infrastructure, internal market openness, physical infrastructure and cultural and social norms. APS and NES surveys are conducted in spring each year based on standardised questionnaire developed by the GEM consortium. The current GEM conceptual framework reflects phases of economic development determined by M. Porter i.e. "factor-driven economies", "efficiency-driven economies" and "innovation-driven economies" (Porter et al, 2002). The Global Competitiveness Report of the World Economic Forum also employs those categories in the GCR index.

Doing Business

The first Doing Business report conducted by the World Bank Group was published in 2003. The Doing Business index 2014 covers 189 countries and it is concentrated on regulatory aspects of each economy. The index provides quantitative measures of regulations for entrepreneurial activities and the indicators used in the index employ two types of data i.e. measurements examining laws and regulations in each country and measurements related to efficiency in achieving the regulatory goal. Overall, the index uses four main sources of information: respondents, laws and regulations, government of each economy and the regional team of the World Bank Group. The Doing Business index also lists the country's distance to frontier (DTF) measure as well as provides a benchmark against regional and high income economy average.

Global Competitiveness Report (GCR)

The Global Competitiveness Report published by the World Economic Forum is one of the leading indices for evaluating country's economy and growth including entrepreneurship. Since

2005, all countries covered by the GCR including Latvia are ranked using the Global Competitiveness Index.

3. GENERAL CHARACTERISTICS AND STRUCTURE OF THE GCR

Structure of the Global Competitiveness Report is based on twelve pillars i.e. institutions, infrastructure, macroeconomic environment, health and primary education, higher education and training, goods and market efficiency, labour market efficiency, financial market development, technological readiness, market size, business sophistication and innovation (Schwab, 2013).

The first pillar Institutions characterises legal and administrative framework and quality of institutions, level of bureaucracy and corruption, transparency and proper management of public finances. The second pillar Infrastructure deals with efficiency of infrastructure, transport and communication network including roads, railways, ports and airports, while the third pillar Macroeconomic environment analyses macroeconomic environment of each country including stability of macroeconomic environment and competitiveness. The next 4th pillar Health and primary education provides assessment of healthy workforce and the quality of basic education whereas the 5th pillar Higher education and training characterises quality of higher education and opportunities for further education and training. The following 6th pillar Good market efficiency evaluates efficiency of goods market, healthiness of competitiveness and level of foreign investments. 7th pillar Labour market efficiency evaluates efficiency and flexibility of the labour market as well as unemployment among young people whereas 8th pillar Financial market development assess effective financial sector and business investments. Evaluation of active usage of information and communication technology (ICT), implementation and employment of the latest ICT products is covered by 9th pillar Technological readiness but size of the market and development of competitiveness is assessed by the 10th pillar Market size. Finally, pillar 11th Business sophistication characterises business networks, strategies developed by companies and development of production processes while the last pillar 12th Innovation assess new technological innovations as well as non-technological knowledge including skills and know-how.

All pillars described above are interrelated and complement each other. The twelve pillars are arranged in three groups using Porter's defined phases of economic development i.e. pillars 1 to 4 characterise factor-driven economies, pillars 5 to 10 are relevant for efficiency-driven economies but the last two pillars 11 and 12 describe innovations-driven economies.

Finally, countries covered by the GCR are also arranged in five groups using phases of economic development. In the GCR 2013-2014 the first group Factor driven economies covers 38 countries including Cambodia, Yemen, Kyrgyzstan and Zimbabwe. The second group comprises economies which are in transition from 1st to the 2nd stage – 20 countries in total including Moldova, Venezuela, Botswana and Philippines. Group 3 – efficiency driven economy includes 31 country i.e. China, Jordan, Romania, Ukraine whereas the group 4 which incorporates countries in transition from the 2nd to the 3rd stage, covers 22 economies in total including such countries as Chile, Estonia, Latvia and Russia. Finally, the fifth group comprises 37 innovation driven economies including Cyprus, New Zealand, Spain and United Emirates. Countries within the specific group are not static – each year several economies move from one group to another i.e. in the GCR 2013-2014 Moldova moved from the 1st to the 2nd group.

4. METHODOLOGY OF THE GCR

Methodology of the Global Competitive Index (GCI) comprises both quantitative and qualitative data. Statistical numerical data in each country are collected by nationally and internationally recognized institutions i.e. in Latvia this task is performed by the Latvian Statistical Bureau is responsible. Quantitative data form 60% of the GCI whereas 40% data are acquired from the Executive Opinion Survey (EOS). Only top executives from the selected companies i.e. the CEO,

CFO, CTO are eligible to participate in the EOS. Companies for the EOS are selected strictly according to the GDP structure of the particular economy i.e. for Latvia this is 4.1% from agriculture, 21.8% from production and 74.1 from services sector. Both large companies and SMEs in equal proportion should be included in the survey. Moreover, to ensure credibility of the GCI the sample should include 50% of new companies which should be randomly selected using specific formula, as well as 50% of companies who were included in the previous year EOS. Finally, the sample of companies should equally reflect capital/large cities and regions. GCR methodology also determines the minimum sample size for the country i.e. for Latvia it was 80 companies.

The questionnaire of the Executive Opinion Survey is structured in 14 blocks which cover general information about the company participating in the survey, overall perceptions about the country's economy, infrastructure, innovation and technology, financial environment, foreign trade and investment, domestic competition, company operations and strategy, government and public institutions, education and human capital, corruption, ethics and social responsibility, travel and tourism, environment and health. Questions from different sections are interrelated, there are no open end questions in the EOS therefore, respondents need to make their assessment using different numerical scales.

5. GCR AND ENTREPRENEURS IN LATVIA

In the GCR 2013-2014 Latvia was ranked in the 52nd place among 148 economies. According to the GCI, in two years since 2011-2012 economy of Latvia has moved up by twelve positions. In general basic requirements i.e. institutions and infrastructure and efficiency enhancers i.e. higher education and training and labour market efficiency in Latvia are ranked fairly high (40th place out of 148) whereas innovation and sophistication factors are placed in the 68th position.

Among problematic factors which were making restrictions of doing business entrepreneurs in Latvia have outlined inefficiency of government bureaucracy, inadequately high tax rates, restrictions of access to financing, irrelevant tax regulations, corruption, inadequate supply of infrastructure, insufficient capacity to carry out innovations as well as inadequately educated workforce. Nevertheless, only the first five restricting factors were mentioned by more than or around 10% of respondents, whereas the rest were evaluated as not crucial for business development.

When analysing twelve pillars and indicators within the each pillar, in pillar 1 (institutions) Latvia is performing well in terms of transparency of government policymaking, also indicators reveal that business in Latvia is not seriously impacted by crime and violence. However, Latvia need to improve efficiency of legal framework in settling disputes and challenging regulations. In terms of the infrastructure, quality of port, railroad and airport infrastructure is assessed on satisfactory level whereas the quality of roads drastically needs to be improved as it was ranked as 110 out of 148. In terms of macroeconomic environment (pillar 3) Latvia was ranked number one in the world concerning inflation rate which can be explained because of fulfilment the necessary pre-conditions for joining the Eurozone. Latvia is relatively well performing concerning the quality of primary education which means that certain basis for entrepreneurial education is ensured from the very start of education (pillar 4). Nevertheless, indicators show that tuberculosis cases and life expectancy can impact entrepreneurial activities in Latvia. Concerning the 5th pillar on higher education and training, internet access in schools and quality of math and science education is positively evaluated while quality of management schools and quality of education system need to be improved.

Indicators for the goods market efficiency (6th pillar) reveal that intensity of local competition, trade tariffs, number of procedures needed to start new business are implemented and performed on appropriate level however, effect of taxation on incentives to invest, buyer sophistication need to be

developed. Pillar 7 on labour market efficiency reveal that Latvia is performing well in terms of women/men ratio in the labour market and flexibility of wage determination but the country underperforms on the capacity to attract talent (112 place out of 148). Regarding financial market development (7th pillar) Latvia has developed the best legal rights index but improvement need to be done concerning ease to access to loans, financing through the local equity market and soundness of banks. Almost all indicators concerning technological readiness (9th pillar) are well performed i.e. Latvia is highly ranked in terms of mobile broadband subscriptions, individuals using internet services and fixed broadband internet subscriptions. FDI and technology transfer as well as firm level technology absorption are indicators which are still underperformed. Indicators related to the market size (10th pillar) showed that exports as a percentage of GDP were placed quite high in the rankings table (29th rank out of 148) whereas domestic market size index and foreign market size index were ranked quite low.

Finally, majority of indicators which characterise business sophistication and innovation (respectively 11th and 12th pillar) were underperformed. Although such indicators as local supplier quality and applications of PCT patents were performed on satisfactory level, Latvia were receiving low ranks in terms of local supplier quantity, state of cluster development and value chain health as well as availability of scientists and engineers and government procurement of advanced tech products.

6. CONCLUSIONS

Analysis of the Global Competitiveness Report reveals that in general there are no substantial restrictions for development and performance of entrepreneurial activities in Latvia. Nevertheless, several aspects in relation to the GCR need to be considered by entrepreneurs who are doing or will be doing business in Latvia:

1) Existing tax system can be restrictive factor for those entrepreneurs who are starting their business and for SMEs in general. This has been highlighted not only in the GCR but also in other global indices i.e. the GEM.

2) Although the level of education in Latvia can be characterised as satisfactory and the level of education in STEM can be even evaluated as good, there is a lack of engineers and high tech specialists which can be seen as a problem for companies operating in this sector. Also, shortage of researchers and scientists in general restricts research and development activities in companies.

3) Although the quality of products and services offered by local suppliers has been evaluated relatively high, solutions for increasing quantity and volumes should be find in order to enter global markets more rapidly. Innovative approaches to the business processes and employment of advanced technologies perhaps can be one of the possibilities to solve the problem.

4) Some of the indicators where Latvia is underperforming cannot be generalized without carrying out additional research for that particular indicator or indicators. For instance, although the quality of roads infrastructure has been evaluated as poor, it cannot be taken as an axiom but needs to be researched more in detail by conducting surveys related to the road construction and maintenance sector.

5) Finally, in general GCR along with other indices can serve as a reference point for entrepreneurs who run or will run business in Latvia. Nevertheless, other local and international researches which analyses and evaluates entrepreneurship and business activities should also be taken into account along with the above mentioned indices.

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HOW RISK AWARE CULTURE CAN IMPROVE PERFORMANCE EFFICIENCY?

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Abstract

Purpose – To overview discussion on development of relationship of risk management and performance efficiency from the perspective of organizational culture. Based on the main corner-stones of risk management and key elements of organizational culture, to discuss the concept of risk aware culture and its impact on performance efficiency.

Design/methodology/approach – Literature review

Findings – Linkage between risk management and organizational culture is established. Synthesizing theories and empirical researches, four key corner-stones of risk management were named: uncertainties, expectations, decisions and impact. Efficiency, improvement and change management are being explained through organizational culture which supports the business. Uncertainties are influencing organizational culture as reflection of basic assumptions. Expectations are linking assumptions and espoused values which create framework for managerial decisions and behaviors. And finally visible artefacts are part of impact. Conclusion is made that risk aware culture concept is not precisely defined yet.

Originality/value – Literature review has been synthesized by integrating risk management corner-stones with key elements of organizational culture developing risk aware culture which is expected to enable management for weighted decisions and precise execution which results in efficient performance. The outcome of this research is expected to serve as basis for further development of the concept of risk aware culture in order to improve the integration between risk management and continuous improvement routines in organizations regardless industrial sector.

Keywords Risk, risk awareness, risk management, efficiency, organizational culture

1. INTRODUCTION

Behind this theoretical paper are purely practical implications associated with internal conflicts between different parts of organization – one is selling, another – managing risks. I have experienced multiple situations when debates about value to the business expansion (turnover) and impact on financial results (cash flow, sustainability) were conducted as two separate monologues. Behind this internal conflict we can find different stereotypes, associated with risk, as for example, that higher risk is linked to greater return or that successful manager shall be courageous, that are leading to the situation, when risk management is perceived not only as separate function, but treated as a barrier to expand business. Risk is not about courage or fair, it is about understanding the business context and about efficiency. Efficiency might be understood in different ways, but quality and results matching the objectives can be taken as common criteria. Encouraging managers to pay more attention to the risks should lead to better results and increased business efficiency. The concept of risk aware culture is not described in detail, however, organizational culture is supporting the business and right installation of risk management elements can align understanding about risks resulting in better business decisions at all levels of organization.

Risk management in scientific literature is being presented and analyzed from different angles and receiving more and more attention from scientific as well as business society. Moreover, the context of risk management analysis is expanding. This can be seen from publications: from the financial risk modeling it has reached strategic management by imposing risk appetite definition. Behavioral aspect from the risk taking impact on personal lifestyle has been shifted to managerial decisions. Significant contextual shift is illustrated by industrial aspect – at the beginning focusing to financial services and pharmaceuticals, risk management becomes more embedded into IT sector

with strong implication of security risk and moving further to other industries. Turning to the risk taking outcome we can see the shift from the financial performance to the broader understanding. Bowman's risk return paradox initiated number of researches focused on risk taking outcome in various industries. At the same time sustainability and efficient performance are more often linked with strategy, leadership, process efficiency, change management but not risk management.

Purpose of this paper to review literature trying to link performance efficiency and risk awareness of decision makers from the perspective of organizational culture. Organizational culture research evolution resulted in shift from purely intangible concept to defined and measurable models, which can support implementation of new practices, including risk management processes and routines, into business activities. The underlying question is how risk aware culture would impact performance efficiency and how to define this culture.

The object is to discuss the interaction of risk aware culture and performance efficiency using literature review as research method.

2. MAIN DIRECTIONS OF RESEARCHES

Literature review has showed large variety of discussion about the risk and risk management shifting from the financial risk towards enterprise risk management. In parallel concerns about risks were spreading from financial services into pharmacy, information technologies, transportation and even manufacturing industries.

The main directions of risk related topics development following the empirical researches can be group into several main streams:

- Concerns about risk impact resulted in studies about risk assessment, risk modeling, financial diversification, risk management techniques {Bowman, Edward H., 1980; Kaplan, Stanley, 1981; Miller, Kent D., 1998; Yang, Chih-Ching 2012; Gunay, E. Nur Ozkan 2012; Matthews, Kent 2013}. Evolution from risk measurement to forecasting produced rich toolbox for assessment of different kinds of risks.
- Response to the risk was connected with governance and strategy, business idea and management {Bernstein, Peter L. 1996; Carpenter, Mason A., 2003; Andersen,Torben J. 2007; Henkel,Joachim 2009; Souder,David 2010; Castaner, Xavier, 2013; Davies, Brandon, 2013}. This stream is proposing valuation of risk management as process and emphasizing managerial side of risk management.
- Management consists of decisions, changes and behavior - personal attitude, resistance and adaptation, which reflects in risk tolerance. Starting from Kahneman and Tversky researches on decisions and preferences in risky context, various researchers were examining personal choices when risk is primarily related with danger to health/life up to change management issues within organizations {March, James G, 1987; Aladwani, Adel M., 2001; Navare, Jyoti, 2003; Wright,Peter 2007; Carlstrom, Eric, 2012; Herrmann,Pol 2013; Kasman, Andnan 2013}.
- Finally, personal attitudes, behaviors and decisions are part not only of risk management but also of efficiency, improvement and change management which are being explained through organizational culture supporting the business {McCormac, Peter, 2013; Lai, Ming-Fong, 2007; Alas,Ruth, 2006; Bryson, Jane, 2008}.

Based on literature review, we would like to propose definition for risk management. It is interesting to notice, that international standard, namely ISO Guide 73, is covering most of discussed above and describing risk as an effect of uncertainty on objectives. Risk is not limited to financial risk but regarded as aggregated enterprise risks, including operational, strategic and other areas.

3. RISK MANAGEMENT CORNER-STONES

Risk definition and risk management concept were changing and developing together with new researches and theoretical discussions. Synthesizing main streams and having risk management definition as point of aspiration, the main risk management corner-stones are to be identified. Starting with Talmudic literature, risk is related with uncertainty, expectations and analysis

{Ohrenstein, Roman A., 1991}. Uncertainty was primarily related with evaluation which is related with unforeseen future – different scenarios would result in different appraisals (and significantly different values). Authors point out the parallel between present value calculation and comparison of "uncertain claims". Thus we identify the first corner-stone: uncertainty. Next corner-stone to be named is impact – financial measurement of risk result and possibility to influence it. In 1980, Stanley Kaplan with B. John Garrick has presented risk as sum of uncertainty and loss, which, on the other hand, can be perceived as hazard divided by

safeguard. Risk impact on results first of all is associated with financial results. Analysis of historical data ended up with conclusion that it cannot guarantee matching future results. At the same time Edward H. Bowman started new destination of research with his risk-return paradox, promoting that higher risk is not guarantying larger return. This conclusion was highly unexpected and followed by empirical tests and researches in different industries. Using Frank H. Knight's view of measurability as tool to distinguish between risk and uncertainty (risk is measurable while uncertainty is not), Ohrenstein et al. are raising problem not only of return estimation but also of outcome distribution.

Uncertainty is about the future outcome which is very much related with the third element – expectation. Expectation can be considered as strong influencing factor to decision making (or risk taking). Behind expectation is either past experience or information. In Talmudic, systematic information gathering is appreciated as tool to control one's economic life {Ohrenstein, Roman A., 1991}. Analytical way to handle expectations is closely related with achievements of mathematicians, particularly Fermat and Pascal, initiating theory of probability. The significant input was made by forecasting and analytical model developers. Here we shall remember the Baye's Theorem which related forecasting estimate of occurrence of particular event with past observations. Formulated in XVIII siècle, it still has been used. Expected outcome from one side is the result of risk identification and assessment, from the other side it is background for responding to the risk.

The forth corner-stone is decision. Theories of choice in analysis of individual risk taking are pointing out to the trade-off between risk and expected return and claiming that normally people are risk averse preferring certain result instead of gambling. However, empirical studies showed that risk preferences are changing together with context. Moreover, individual decisions and managerial risk taking behaviour are not perfectly compatible, as "managers look for alternatives that can be managed to meet targets, rather than assess or accept risks" {March, James G. 1987}.

Each decision produces result which can be assessed and evaluated. Repeated procedure, which is described as Deming cycle, is building the foundation for the modern risk management approach as a process. Important role has been played by Gustav Hamilton, who in 1970s

proposed the risk management circle, where the process of risk management was presented as interaction of analytical and managerial steps, starting from assessment up to communication. He went even further, by identifying risk origin and suggesting risk ownership. These principles are reflected in existing international standard.

Having corner-stones we need material for further construction of sustainable approach, covering all kinds of risks within the business. All corner-stones are integrated and producing joint result which might be named risk awareness - the condition when decisions made with consideration to the risk involved but not risk aversion. Moreover, risk management is not just set of tools but rather as a process within organization. And, as all processes and behaviors, can be named as part of organizational culture.

4. ORGANIZATIONAL CULTURE

Literature review proved not only development of organizational culture, but expanding areas of its application. Organizational culture is the pattern supporting the business and can be described by underlying tacit assumptions, espoused values and visible artefacts {Schein, Edgar 1996}. The pattern for sharing basic assumptions socially constructed and validated as it has been developed by a specific group of individuals (organisational members) as it learns to cope with the problems of

external adaptation and internal integration {Busco,Cristiano 2011}. Some scholars are strongly advocating that organizational culture shall be managed and changed {Norton,Bob 1993}. Internal processes, supply chain management, change management are changing the context and are associated with risks {Arterbrant, Anna 2003; Herrmann, Pol, 2013; Hu, Songcui, 2011; Busco, Cristiano, 2011;}. Following this idea, risk management can be embedded into organizational culture resulting in risk aware culture, assuming that when group of people share common values it effects their perception and behavior. Now previously discussed risk management corner-stones will be matched with cultural aspects.

First of all we discussed uncertainties. Resistance to change and risk avoidance is natural response from existing culture to changing context. Matching organizational culture typology {Stock and McDermott, 1999} and supply chain strategies, James Jungbae Roh et al. came to

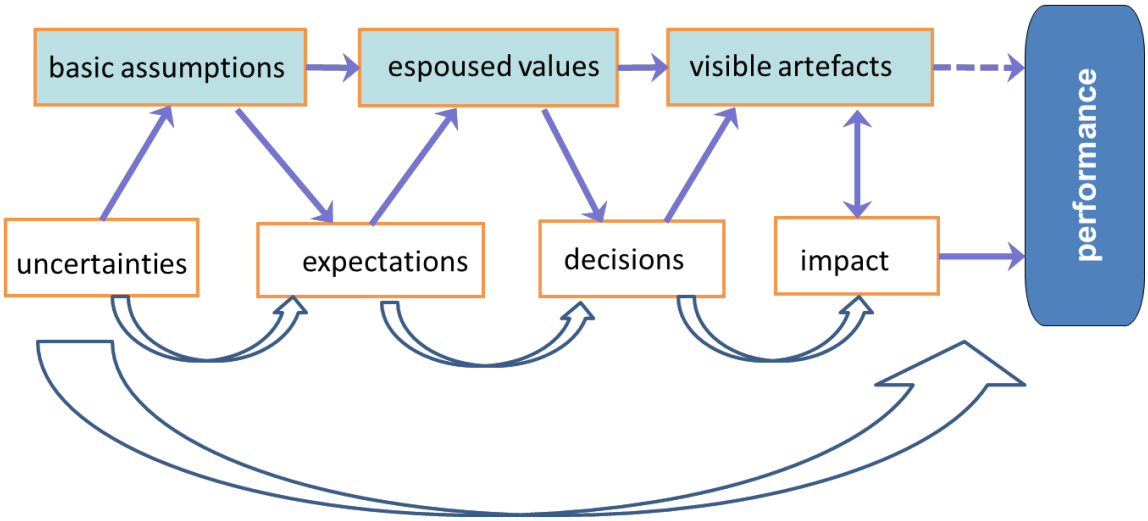
conclusion that specific SCS may be better fitting to particular type of culture in order to achieve best results.

Authors merge SCS typology with organizational culture types based on supply uncertainty, which is related with internal flexibility, and demand uncertainty, which is a reflection of external orientation, and identify best-fit pairs:

- Efficient supply chain (low in both demand uncertainty and supply uncertainty) with hierarchical culture (stability, standardization and efficiency);
- Risk hedging supply chain (low in demand uncertainty but high in supply uncertainty) with group culture (based on human relations);
- Responsive supply chain (high in demand uncertainty and low in supply uncertainty) with rational culture (goals and control);
- Agile supply chain (both high in demand uncertainty and supply uncertainty) with developmental culture (creativity, innovative problem-solving).

Again, keywords are repeating in discussion about risk management, supply chain management and organizational culture – process, efficiency, human relations, elements of management and decision making.

In this paper, it is proposed to sum up, that uncertainties are influencing organizational culture through basic assumptions. Expectations are linking assumptions and espoused values:



Finally, when it comes to decisions, visible artefacts can explain pattern of decision making processes.

Adding performance as a measurable consequence of decisions and combining all risk management corner-stones with the main elements of organizational culture, we can start integrating them together.

5. INTERACTION BETWEEN PERFORMANCE EFFICIENCY AND RISK AWARE CULTURE

Meaning and impact of organizational culture on performance is not questionable: while some researches are advocating organizational culture as vehicle supporting organizational changes by influencing employees attitude {Alas,Ruth, 2006}, other pointing to its impact and naming it as a solution for the problem of resistance to change {Calstrom, Eric 2012}. Knowledge management is very much effected by culture. Defensive attitude to decision making is resulting in risk avoiding culture which prevents employees fully utilize their capabilities and skills {Lai, Ming-Fong, 2007}. Going further to the context of risks, risk management framework development is being associated with risk culture in the organization {McCormac, Peter, 2013}. Best practices of risk management are strongly connected with shared responsibilities, transparency, monitoring and control {Brooks, Douglas W., 2010; Damodaran, Aswath, 2008}. Thus, there is no defined answer how risk aware culture can improve performance efficiency.

Nevertheless, further development of risk aware culture definition and evaluation of its impact is worth of further research.

6. CONCLUSION

Literature review showed that risk definition developed from the pure financial result to the uncertainties impacting objectives. Several main directions of risk and risk management research development were identified which are covering risk impact and financial instruments, response to the risk via strategic and daily management and behavioural part of risk tolerance.

Synthesizing theories and empirical researches, four key corner-stones of risk management were named: uncertainties, expectations, decisions and impact.

Efficiency, improvement and change management are being explained through organizational culture which supports the business. Uncertainties are influencing organizational culture as reflection of basic assumptions. Expectations are linking assumptions and espoused values which create framework for managerial decisions and behaviours. And finally visible artefacts are part of impact.

Strong risk aware culture where risk management corner-stones are linked with key elements of organizational culture, is expected to enable management for weighted decisions and precise execution which results in efficient performance. The answer how risk aware culture can improve performance efficiency is subject to further research.

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THE NEXT STEP IN THE ORGANIZATION OF PUBLIC MEDIA OF LATVIA AND COMMUNICATION WITH PUBLIC

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Abstract

Audiovisual media in the 21st century have become a leading carrier of information. This information must be made as objective and versatile as possible. Public media are asked to play this role in the modern day society, and one of their fundamental tasks is also to strengthen the public awareness and democratic process of the members of society.

Rapid technical progress has significantly changed the consumer's behavior and daily habits. Development of internet and its provided opportunities increasingly attract the socially active part of society. Various bloggers and opinion leaders in different social networks (Twitter, Facebook, Draugiem.lv) increasingly dictate the public opinion regarding various events and developments. Volume of the audience of public television and radio gradually decreases at the expense of internet media.

The purpose of the paper „The Next Step in Organization of Public Media of Latvia and Communication with Public" is to promote new philosophy of the public media of Latvia and the way of communicating its content in line with the rapid technological development and latest trends in the social communication of the modem society.

Public media as an alternative is offered to fully "emerge" into broadband internet environment, ensuring multiple types of content use and modification. The current paradigm of public media vertical content development should be gradually switched to new – network communication in its development and distribution. The public media instead of clear, standardized and generalized information should be given only the source material of the content and illustration of facts, allowing the interpretation of it in the local context, by putting through the prism of formers of opinion of various social networks. Crowdsource should be involved in the formation of the content of public media, at same time using it as means to get feedback from the target audience.

Mostly the monographic research method is used in preparation of the research paper, gathering information from latest scientific articles and publications of the field on this subject, as well as the method of statistical analysis, studying audience indices of various electronic media of Latvia.

Research limitations refer to statistical data for the last five years regarding public broadcasting organizations of Latvia, use of internet and development of infrastructure. This period of time is sufficient to get an opinion regarding the trends of use of electronic media in the country.

The findings provided in the paper might have practical application in forecasting development of public media of Latvia and designing specific future models.

Even though the types of electronic communication and instruments discussed in the paper have already been applied worldwide to some extent, such public media solution is not implemented in an organized and complex way, therefore it should be considered as innovation.

Key Words

Public media, electronic media, broadband, social network, social communication

1. INTRODUCTION

The members of the modern democratic society nowadays cannot imagine their daily life in absence of constant flow of information. This information must be made as objective and versatile as possible. Public media are asked to play this role in the modern day society, and one of their fundamental objectives is also to strengthen the public awareness and democratic processes of the

members of society. Public media therefore have become an integral part of the democratic country.

Public broadcasters - television and radio have so far been able to fulfil this function more or less successfully. Liberalization of the media market, which started in the ’80 of the last century, however, ended with pessimistic forecasts regarding the future of public broadcasters. Public radio and television, which for many years have been in position of monopoly in Europe, are now seeking new sources for their existence, due to competition and extensive social, economic and technological changes.

Even though the public broadcasters in many European countries still enjoy the trust of their audience and successfully resist ever increasing aggressive attempts of commercial broadcasters to get the audience under their wing, the national public broadcasters have seen their better days (Open Society Institute, 2005)

„The greatest challenge of the public media is to prove that they can provide valuable alternative for commercial media and at the same time attract broad range of audience...,” admits Trine Syvertsen, the professor at the University of Oslo (Syvertsen, 2003).

Digitalization process of electronic means of communication, new consumption habits of media content, new requirements for the content and format of information, global economic crisis and international political instability determines necessity for significant changes in the operation of public broadcasters.

News methods must be found to address the society, in order to fulfil the mission of public media and not lose its importance in general.

Even though statistical data shows that people in the developed countries still spend more time in front of TV than they do at their computers on daily basis, this data may not be directly attributed to the trends and habits of dissemination and use of the digital signal. Increasing number of consumers of the video signal choose to receive it by means of internet network. Broadband internet can ensure such speed of data transmission that the consumer may choose whether to use this information through the computer or to connect it to his TV set and watch on the big screen. In this moment it is complicated to understand whether the consumer is using television or internet. It must be, however, taken into consideration that the use of television through internet gives additional option- interactivity. And interactivity significantly changes the relations between the broadcaster and consumer. From single-direction program broadcasting it turns into two-way communication flow.

It means that the current operation of the existing public broadcasters of Latvia – „Latvijas Televizija” and „Latvijas Radio” must be also redirected, establishing a completely new company – Public media, which would be broadcasted mostly in broadband internet network. It would allow more efficient use of financial, technical and human resources, but most importantly, such modern format of communication would allow maintaining and activating the contact with society, establishing absolutely new principles for creating the content of programs.

Research regarding the role of information in the modern society, the role of public media in it, as well as habits and desires of viewers has been conducted for the purpose of reaching the set goal. Results of the research show the necessity to look for new and progressive public media model.

Information regarding experience, problems and solutions of other democratic countries must be obtained in search of solutions. The experience of the European countries can be useful also taking into consideration that all modern day development trends of information technologies existing in the Western European countries, for most part sooner or later reach Latvia.

2. OBJECTIVES OF THE MODERN PUBLIC MEDIA

One of the main conditions in the modern day democratic country is free and as wide-reaching as possible objective information, allowing each member of this society to gain knowledge and understanding regarding the processes taking place in society, country and in the world. This information provides an opportunity for each individual to form his own opinion regarding these

processes, which then helps him to fully participate in the democratic processes, by expressing his will and adopting the necessary decisions.

Section 10 of the European Convention of Human Rights and Fundamental Freedoms sets forth that everyone has the right to freedom of expression. This right shall include freedom to hold opinions and to receive and impart information and ideas without interference by public authority and regardless of frontiers. This Article shall not prevent States from requiring the licensing of broadcasting, television or cinema enterprises. The exercise of these freedoms, since it carries with it duties and responsibilities, may be subject to such formalities, conditions, restrictions or penalties as are prescribed by law and are necessary in a democratic society, in the interests of national security, territorial integrity or public safety, for the prevention of disorder or crime, for the protection of health or morals, for the protection of the reputation or rights of others, for preventing the disclosure of information received in confidence, or for maintaining the authority and impartiality of the judiciary (European Council, 1953).

Present day political instability and propaganda war of some countries against other countries has at the same time come dangerously close to Europe. Freedom of speech declared by democratic world and the European Convention on Cross Border Television (European Council, 1998), on one hand, encourages having diversity of opinions, while, on the other hand, this freedom may be used in bad faith. It is rather complicated to set the line when the mass media of one country turns from the democratic media into an instrument of propaganda, becoming a threat to security interests of another country.

Electronic media are increasingly being used as the marketing instrument for sales promotion of goods and services. Commercial advertisements of various kinds have flooded all media. People in the modern society each day have to face large volume of information, which may not be independently comprehended and systemized. Public media could help to resolve this problem of "information flood". In the situation of information excess, it is important from the social point of view to find the optimum way, how the population of democratic country could be directed toward real values and topical global information in regional context, using the public media.

Public media institution can be entrusted this responsible task, providing that it is absolutely independent from the influence of political parties and state administration, from its foundation and editorial policy to supervision and funding procedure. Public media of the country must fully represent the interests of the entire population.

The work on new type of public media of Latvia prototype was started already in 2010, combining both existing public broadcasters into single public media, but the reforms take place slowly and inefficiently, during their course facing lack of the politicians' interest in the presence of strong public media, because powerful, editorially independent media mercilessly discloses and analyses also the domestic political processes and shady actions of the politicians. Even though the draft of the new single public media was developed in 2012, its implementation is currently "stuck" in the corridors of power, and it may not be estimated, when it will finally take place.

Nevertheless, the technological development takes place and new public habits of information communication appear, demanding to look for the next new solutions in the objectives and operational principles of the public media.

In the next version of the public media, it could be disseminated by means of broadband internet on various platforms in joint package with other publicly important sections that would concern such areas as libraries, museums, educational establishments, art and sports centers, health care, state and local government services, etc.

Possibilities of high speed digital data transmission would allow the end user to choose the media instrument, through which the supplied information could be used – internet, PC tablet, mobile phone or TV.

3. CREATION OF PUBLIC MEDIA NETWORK

In order to understand the operational methods of the next level public media, we should start with specifics of dissemination and use of the modern electronic information.

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Very rapid development of computer infrastructure and digital technologies at the beginning of the 21st century has created environment for new type of audio visual products – increase of diversity of the internet services, entertainment opportunities provided by video screens "walls", mobile phones and PC tablets, use of many other active and interactive technical tools indoors and outdoors, etc. Digital convergence (from Latin convergere – to tend to meet, incline toward each other) has become a reality, which is ensured by mutually connectable devices, platforms and services (NRTP, 2005). The role of electronic media in the society has thus significantly changed.

Rapid revolutionary changes take place in the environment of electronic media. The viewer so far could watch the vertical program planning offer, i.e. to watch what is broadcasted at that specific moment, and to select by remote control precisely what may be received at that particular moment from any specific television program. Owing to development of technologies, the client is more frequently offered new services - to watch the desired program, when he wants it and not when the specific programmer broadcasts it. It is best to offer such service using streaming technologies, but recording technologies may be used as well. An increase of services on individual demand will also be observed, wherein the selected television programs will be delivered to specific subscribers, using Internet protocol in cable television network.

Stable increase of the internet users can still be observed in Latvia. In autumn of 2012, approximately 70% of the Latvian population aged between 15 and 74 had used internet within the last 6 months. Increase of these indicators takes place annually by approximately 3%. The number of internet users in the age group between 20 and 29 currently exceeds 96%, while in the age group 15 – 19 it is 98% (TNS, 2013). This data shows the trend of the new generation to use the internet services as their main source of information. If we look few years ahead, internet use of the entire population of Latvia will reach close to 100%. It means that the best way for the public media to reach the audience in the near future will be the internet communication network. It would allow to get rid of rather expensive terrestrial broadcasting, which is currently the most expensive type of dissemination of audio visual signal.

Broadband internet network is the most efficient instrument for transmission of large volume data. Extensive work takes place for the development of broadband communication infrastructure in Latvia. Broadband communication infrastructure is currently available in 95 % of the territory of Latvia, which ensures that the internet services are available not only in the cities, but also in the rural areas. Development of the broadband electronic communication infrastructure provides an opportunity for the regional merchants of electronic communications or providers of internet services to connect to it and to ensure for the end users so called "last mile". This will also facilitate the competition in electronic communication market, because the providers of internet services can render their services to a broader range of clients, by purchasing the necessary access to the broadband communication network for lower prices. In the context of public media, the state and local governments could get involved in the construction of the "last mile", because the state will be thereby able to fully ensure that the "package" of all social areas and electronic services reaches each member of society, which at the same time is also the main broadcasting condition of the public media.

Retail service price for the broadband internet users in Latvia is the lowest in the European Union, which significantly facilitates attraction of clients to these services. Internet becomes more available for the consumers both in financial and technical terms. Since this established infrastructure ensures wireless internet, cabling and wiring is not necessary. Fixed phone line is also not necessary – only a computer and a device for interception of radio waves (modem). Owing to ever increasing dissemination of broadband services in the territory of the country, Latvia occupies the first place in European Union with average connection speed of 9 Mbps and pulls ahead of such countries as Switzerland, Sweden and Finland. Latvia still has the fastest internet in Europe and the forth fastest in the world. In 2013/2014, the Latvian Internet Association has set a goal to ensure availability of internet in the entire territory of the country and to focus on the issues related to development of electronic services and digital content, as

well as the issues related to the regulation of single digital information space in Latvia (LIA, 2013).

Structural reform of the public media, transforming the existing public broadcasters into public media, will give the final push for strategic transfer from the principle of complex analogue vertical operation to a new digital network multilayer model.

4. ORIGINATION OF CONTENT AND COMMUNICATION

Unlike the communication of single-direction vertical broadcasters' programs, new interactive connection will determine also other principles for origination and organization of public media content.

Internet nowadays ensures that any member of society can become a part of media. Such example in Latvia is a portal „Draugiem.lv". Communication in this environment is not limited in time or space, therefore this media can be considered as one of the most progressive. Electronic publishing, which ensures very fast exchange of information and eliminates the differences between the author and reader, in case of Latvia also means partial elimination of differences between the government representative and society, which especially manifests itself in internet discussions. New opinion leaders - bloggers appear in the environment of social networks, which often create the public opinion and determine their value system.

The new public media also must be ready to communicate with society and respect its habits for obtaining and perceiving information. The new public media should possibly form permanent communicative or even legal relations with informal leaders of the social networks and largest interest groups. The most efficient way to get the content prepared by the public media to consumers is to use these authorities as additional communication and localization reflectors. The information would reflect multiple times on its way to consumers, each time obtaining specific accents and "shades", which would make it understandable and topical for specific segments of society.

Another aspect of originating content is the local context of the information. On one hand, the world is "becoming smaller", and it is determined by the local trends and technological capabilities to receive operative information within few seconds from anywhere in the world. Differences and specifics of each region at the same time become of increasing importance. It becomes not only the character priority of goods and services, but also will play a greater role in the formation of the public self-confidence and point of view of the world.

Conclusions were drawn upon studying the wishes of the audience that the goals and objectives of the regional and local TV channels in the opinion of the respondents are to provide direct information regarding the problems topical for the local population, ensure independent local information and propagate concerns and interests of the local population (Berzins, Nebel, 2006).

It means that the new public media must reduce the monopoly of content generation, by involving in it broad networks of local independent producers and correspondents. The generation of content and bundling, loosing its complex status, could become something similar to program exchange, where the producer companies from the entire country could offer their programs. The public media itself could produce the main core of information – generation of news and broadcasting of the events of the state importance. The structure of program bundling (currently called as program direction) would select the best content generators, sign the agreements with them regarding creation of programs, and also purchase the foreign programs, thereby forming its program policy, allowing the consumer to choose what and when to watch from the offered list of information instead of generating vertical daily program lists.

Slightly similar operation is currently carried out in the USA by the Public Radio Exchange (PRX). It is an organization without its own broadcasting; therefore it is not a competition object in the radio market. It does not produce its own content, therefore is not involved in a conflict of interest with other broadcasting stations. PRX manages the non-commercial radio programs created by approximately 20 000 independent producers. PRX

regularly controls the content and technical quality of these programs, creating original program rating based on thematic blocks. PRX offers these programs to any other broadcasters or users, thereby giving them publicity and disseminating them. PRX at the same time protects the rights of these program producers, by signing agreements and monitoring compliance with the intellectual property rights (Public Radio Exchange, 2014).

Consumer of the new public media, which could include the establishments and organizations, may be entitled not only to obtain its content, but also further send it to other users of network, comment or interpret and freely use the obtained information. Such intermediary users could be, for example, universities, non-governmental organizations, commercial media, local government establishments, interest groups, bloggers, etc. Thus, the information of the public media could be disseminated without any limitations and serves as „source material" in much longer chain of information flow, that it can be performed by any of the current public broadcasters, including "Latvijas Televīzija" and "Latvijas Radio". At the same time, it is efficient communication, by conveying publicly important information to the end consumer in the manner understandable and accessible to him.

5. CONCLUSIONS

1. Rapid modern-day development of technologies, changes in communication habits of information consumers, as well as an increase of competition among commercial media significantly weakens influence of traditional public broadcasters in the society.

2. Fluctuation of global economy and political instability both in the Middle East and the European regions, as well as the speed of development in the Asian countries creates so rapid and dynamic changes, that the society oftentimes has complications to establish its current value criteria and vectors of progression. This situation requires a democratic country to have public media that is trustworthy and helps to understand.

3. Ever increasing volume of information, which on daily basis pours "over" the heads of the individuals of the developed countries in the 21st century, creates a serious problem in respect of its selection, structuring and purposeful use. Public media should play important role also in this area, by helping to „separate the wheat from the chaff".

4. In order for the public media to successfully carry out its main objectives and sufficiently reach the target audience, it must be available in the environment, where the potential audience can be found –in various internet platforms.

5. Well-developed infrastructure of the broadband internet in Latvia would allow using it without high additional investments as the main information dissemination network of the public media.

6. Modern-day institution of the public media should be viewed in a single context with other social areas of the state and non-governmental organizations, such as museums, libraries, educational establishments, health care, associations, electronic services of state institutions, etc.

7. Content generation of the public media must be changed conceptually, by switching from the vertical program planning principle to horizontal network multilayer communication structure.

In order to successfully continue the subject started in this article, review of the laws and regulation serving as the basis for the policy of public media of Latvia must be carried out to understand what changes need to be made in it, when switching to new paradigm of a public media. The next step would be studying the structure of public internet portals and operational principles of the most perspective democratic countries and development of conception of a new public media of Latvia.

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HIGHER EDUCATION ESTABLISHMENT CHOICE INFLUENCING FACTORS

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Abstract

Demographic and economic situation, including emigration, is in great extent influencing number of students in higher education establishments in Latvia. Higher education establishments use different approaches for student attraction to their education establishments including aggressive marketing campaigns and including providing study possibilities for students from foreign countries.

Researchers worldwide have devoted their research on different aspects of student attraction to the respective higher education establishment and respective study programme.

Aim of the current research is to evaluate the factors influencing selection of higher education establishment and higher education study program.

Methods used for research: scientific publications and research results study, survey of secondary school pupils on factors influencing selection of higher education establishment and study program. The survey was realised by help on questionnaire and conducted by personal interviews in five largest cities in Latvia. In the survey the evaluations of different aspects were asked to evaluate in scale 1 – 10, where 1 - not important, 10- very important. In survey participated 659 pupils. The results of responses in surveys were analysed by help of descriptive statistics: indicators of central tendency or location (mean, mode, median) and indicators of variability (standard deviation, range, standard error of mean); responses cross-tabulations by sex, by age and by other dimensions were analysed, as well as methods of multivariate statistical analysis: correlation analysis and factor analysis were applied.

The research results have indicated that some aspects on selection of higher education establishment and study program are traditional and predictable, but some aspects are on great extent influenced by higher education establishment and sometimes study program marketing activities, by marketing communication channels, by marketing tools. The obtained results could be useful for practical use of new student attractions to the higher education establishment and study program.

Key words: marketing of education programs, customer satisfaction, marketing channels

Theoretical background

1. INTRODUCTION

As competition on education market is getting stronger and stronger, more aggressive marketing has been applied (Dominici & Palumbo, 2013) for marketing of higher education institutions (Michael, 1990), strategic marketing issues are on big attention and analysis (Csikosova, et al, 2014), academic research has paid a lot of attention to student expectations and satisfaction in realisation study programs (Ravidran & Kalpana, 2012), the role of student expectations are on research agenda also in respect for choice of higher education institutions (Vossa, et al, 2007), cultural differences in applying marketing have to be taken into account (Engelen & Bretel, 2011), different kinds of offered education levels (Michael, et al, 1995), different study programs (Dillon-Malone, 1970), different countries have different approaches in marketing of study programs (Nicolaee & Stan, 2013), use and develop different marketing strategies in promoting study

programs in different markets (Cheung, et al, 2010), (Frølich & Stensaker, 2010), (Piperopoulos, 2012), globalization matters (Mazzarol, & Soutar, 2012), as well as ethnicity and gender (Moreno & Flowerday, 2006), information and source preferences have to be taken into account in marketing of higher education programs (Bonnema, & Van der Waldt, 2008). The continuous academic competition forces higher education establishments to make a lot of efforts to attract and retain students, after graduation, by including them in next educational cycles, therefore, investigating students' satisfaction, considered the main higher education consumers, becomes a major premise for their intention to stay and learn in the same institution (Negricea, et al, 2014), taking into account international aspects in study program realisation (Wilkins & Balakrishnan, 2013), a lot of attention is paid to instruction materials and their quality (Lee, et al, 2014), several models on marketing of higher education have been developed (Maringe, (2005). For different higher education establishment marketing strategies use different research methods are applied, including correspondence analysis (Ivy, 2001). Researchers have developed methods how an emotionally driven approach to branding can help create meaningful connections with potential undergraduate students and can positively influence choice (Durkin, et al, 2012). Already in end of the last century researchers have paid attention to the increasing competition in higher education, including that on MBA degrees (Nicholls, et al, 1995) – the authors of the respective paper have stressed "… it is surprising that more attention has not been paid to marketing issues, such as are educational institutions really "customer-oriented"?; do they choose the most appropriate market segments?; the complexities of the decision processes of the "buyers" (Nicholls, et al, 1995) and other aspects are on detailed research focus world – wide.

2. RESEARCH METHODS

Methods used for research: scientific publications and research results study, survey of secondary school pupils on factors influencing selection of higher education establishment and study program. The survey was realised by help on questionnaire and conducted by personal interviews in five largest cities in Latvia. In the survey the evaluations of different aspects were asked to evaluate in scale 1 – 10, where 1 - not important, 10- very important. In survey participated 550 pupils. The results of responses in surveys were analysed by help of descriptive statistics: indicators of central tendency or location (mean, mode, median) and indicators of variability (standard deviation, range, standard error of mean); responses cross-tabulations by sex, by age and by other dimensions were analysed, as well as methods of multivariate statistical analysis: correlation analysis, variance analysis and factor analysis were applied.

Empirical research results

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Table 2.

Main statistical indicators on study program selection motives of possible students in Latvia in 2014

Statistical indicators		Employer's request	Family request	Possibility to obtain interesting profession	Possibility to be in inteligent society	Possibility to get well-paid job	Possibility to get presitious profession	Possibility to get social network	Possibility for self-realisation	Possibility to study together with school friends	Possibility to improve life quality
N	Valid	655	656	656	656	658	656	652	652	656	659
	Missing	4	3	3	3	1	3	7	7	3	0
Mean		6,99	5,41	8,57	7,34	8,71	8,15	6,92	8,23	5,78	8,41
Std. Error of Mean		0,092	0,101	0,059	0,082	0,063	0,072	0,168	0,067	0,102	0,066
Median		7	5	9	8	9	9	7	9	6	9
Mode		8	5	10	8	10	10	8	10	7	10
Std. Deviation		2,359	2,581	1,499	2,103	1,609	1,837	4,295	1,715	2,608	1,696
Variance		5,567	6,663	2,248	4,421	2,589	3,374	18,446	2,942	6,803	2,878
Range		9	9	8	9	9	9	98	9	9	9
Minimum		1	1	2	1	1	1	1	1	1	1
Maximum		10	10	10	10	10	10	99	10	10	10

Source: Authors calculations based on Glorija Sarkane conducted survey in 2014, n = 659, Evaluation scale 1-10, where 1- not important; 10 – very important

The most higher evaluations of the secondary school pupils – future students have been given to the statement "possibility to get well - paid job", where arithmetic mean was 8,71, mode was 10 and median was 9 (half of pupils gave the evaluation less than 9 and half of respondents gave evaluation higher than 9) for this statement. Close to those evaluations were evaluations for the statement "possibility to obtain interesting profession", the lowest evaluations were given to "family request"

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as motivation for getting higher education – arithmetic mean was 5,41, mode 5 and median 5 although the full range of evaluations were covered by the respondents.

Table 2.

Distribution of the Evaluations of the Statement "Possibility to Get Well – Paid Job" in Latvia in 2014

Evaluation	Gender		Total
	male	female	
1	1	2	3
2	0	1	1
3	0	4	4
4	7	5	12
5	6	4	10
6	12	14	26
7	33	40	73
8	49	46	95
9	73	74	147
10	109	168	277
Total	290	358	648

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Rotated Component Matrix[a]

	Component		
	1	2	3
Employer's request	,177	,166	,694
Family request	-,241	,618	,428
Possibility to obtain interesting profession	,657	-,133	,243
Possibility to be in inteligent society	,558	,503	-,064
Possibility to get well-paid job	,685	-,221	,170
Possibility to get presitious profession	,622	,207	,180
Possibility to get social network	,258	,582	-,060
Possibility for self-realisation	,709	,126	-,087
Possibility to study together with school friends	-,071	,761	,091
Possibility to improve life quality	,661	,075	,082
Possibility to get well-paid job	,129	-,043	,732

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

Rotated Component Matrix[a]

	Component		
	1	2	3
Employer's request	,177	,166	,694
Family request	-,241	,618	,428

a. Rotation converged in 6 iterations.

Source: Authors calculations based on Glorija Sarkane conducted survey in 2014, n = 659, Evaluation scale 1-10, where 1- not important; 10 – very important

The results of factor analysis have indicated that as a result of factor analysis by use of varimax rotation as a result of 6 iterations there were created:

Complex factor 1: Professional development factor;

Complex factor 2: Social communication factor

Complex factor 3: Employer attitude

More detailed analysis of the obtained results will be developed in the future publications.

CONCLUSIONS

Theoretical findings as well as empirical research results confirm that specialists in marketing have to be involved in preparation of higher education marketing strategies development, customer – next student segmentation and have to be taken into account that it matters which information channels are used, have to be taken into account cultural, gender and age group differences.

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LIQUIDITY RISK EVALUATION AND MEASUREMENT IN COMMERCIAL BANKS

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Abstract

The nature of the liquidity risk lies in specific peculiarities of banking institutions activities. Thanks to a big amount of short-term resources banks can afford to offer long-term loans drawing their profit from higher interest rates on loans. It causes a situation with a discrepancy in the terms and the sums of assets and liabilities. As a result, the bank is exposed to the risk of being short of current liquidity in case a large number of depositors would like to withdraw their money. The bank is able to collect its resource base either by attracting additional deposits at higher interest rates or by means of a compelled unprofitable realization (selling) of its other assets. Apart from that, another source of potential liquidity problems is bank sensitivity to the fluctuations in interest rates: in case they grow, some of the depositors could withdraw their money in search of higher income in other deposits (investments); obtaining liquid assets by means of loan borrowing could prove to be more expensive while some kinds of loans could turn out to be unavailable.

Taking into account the above-mentioned, the authors make a research of the problems of imbalanced liquidity in commercial banks considering the influence of both external and internal factors; reveal the reasons which have caused them, as well as expose the drawbacks in the imbalanced liquidity risk management.

Keywords: liquidity ratios, asset and liability management, gap analysis, liquidity risk, and imbalanced liquidity.

1. INTRODUCTION

There are many banks around the world that are faced with the problem of imbalanced liquidity, which is related with mismatch of obtained funds and assets operations. Commercial banks are increasing the quantity of long-term loan that are not secured by long-term resources. The short-term resource transformation into the long-term assets threatens bank liquidity, and as a result, can lead to the bank insolvency. But the content of an unnecessarily high sum of liquidity assets can have a negative impact on the banks profitability, because the money in the customers' current accounts does not earn anything. Therefore the management of liquidity is very important. The

management of the commercial bank should choose liquidity assessment methods that would be able to identify, evaluate and manage every factor that influences liquidity.

The financial crisis in Latvia and Lithuania had several factors that contributed it: with the joining of the European Union the commercial banks had too much faith in the sharp increase of the income levels of the population, the cheap loans from foreign banks and the optimistic forecasts on the economic development resulted in an increase of credit transactions. The excessive increase assets (loans) in the commercial banks until mid 2008 promoted an investment boom in the real estate market and the creation of a price bubble and its eventual rupture. Because of the low-quality loan portfolio considerably decreased the liquidity of commercial banks in Latvia and Lithuania. This example proves the necessity of liquidity management and evaluation the problems in commercial banks.

The research objects of this paper are Latvian AS "LatsBanka" and Lithuanian AB "LatsBankas", which is a subsidiary of Latvia's bank and independently operates in Lithuania's bank sector.

The aim of this research is: Based on the assessment and the management of liquidity theory to make the Latvian and Lithuanian commercial banks' liquidity analysis and evaluations, to detect existing problems of liquidity management in Latvian and Lithuanian banks and to develop proposals for improvement and development of liquidity management process.

To achieve the aim of this research the following objectives are solved:

- to study theoretical aspects of commercial banks liquidity and to determine the factors that influence it;
- to clarify the reasons for commercial banks liquidity problems;
- to make a comparative liquidity analysis between Latvian and Lithuanian commercial banks;
- to ascertain the risk levels of an imbalanced liquidity;
- to study Basel III regarding the management of commercial banks' liquidity;
- to work out some suggestions for banks in Latvia and Lithuania that could increase efficiency of liquidity management.

During the research the following analyzes are used: analytical, graphical, statistical and empirical research method. The theoretical and methodological basis for this research comes from specialised scientific literature, the legislative provisions of the Republic of Latvia and the Republic of Lithuania, regulations of supervisory authorities and the annual reports of the banks.

2. LIQUIDITY RISK MANAGEMENT: THEORETICAL ASPECT

Liquidity and liquidity risk management are the key factors for the safety of business operations in any commercial banks (Bertham, 2011). Recently, many banks are facing the problem of

liquidity strain when severe competition about how to attract deposits forces the banks to find other sponsors (Smith, 2012). Unreasonable liquidity is the first sign of financial instability (Schinasi, 2011). Together with the development of finance market, opportunities and risks in liquidity management of commercial banks will also meet a correlative increase. This shows the importance of planning the liquidity needs by the methods with high stability and low cost in order to sponsor for business operations of commercial banks in the global growing competition (Kochubey & Kowalczyk, 2014).

Liquidity risk can be measured by two main methods: liquidity gap and liquidity ratios. The liquidity gap is the difference between assets and liabilities at both present and future dates. At any date, a positive gap between assets and liabilities is equivalent to a deficit (Bessis, 2009).

Liquidity risk is usually measured as liquidity ratio which is practically calculated in two different forms. In first type, liquidity is adjusted by size which includes the ratio of cash asset to total asset (Barth, 2003; Demirguc-Kunt, 1998), the ratio of cash asset to deposits (savings) (Chen, 2010). Second type includes the adjusted loan by the size which includes the ratio of total asset and/or the ratio of net loan to total asset (Kosmidou, 2008). In first type, the higher is the liquidity ratio, the higher is the liquidity level, and therefore, it is less vulnerability against bankruptcy. In contrast, in second type, the higher are the values of ratios, it will represent that banks will undergo higher liquidity risk. Financial gap ratio introduced by Saunders and Cornet (2007) is used in this study. They expressed that liquidity risk criterion is determined based on financial gap. Bank managers mostly assume core deposits as stable source of funds which can permanently finance the supply of banking loans. Generally, core deposits are regarded as loan resources with the least cost. Financial gap is defined as the difference between loan and bank's core deposits. If financial gap is positive, the bank should fill this gap by its cash funds through selling cash assets and borrowing from money market. Therefore, financial gap can be estimated by subtracting the borrowed funds from the cash assets. This financial gap represents financial needs of the bank after selling its cash assets. When the economy is under stagnation and financial market increasingly demands for Cash funds, it is when the banks are more exposed on liquidity risk. Therefore in this study, it seems that financial gap is a more appropriate alternative for liquidity risk of the bank. For standardization of financial gap, the variable of financial gap is divided by total asset (Naser Ail Yadollahzadeh Tabari, Mohammad Ahmadi, Ma'someh Emami, 2013).

Recent studies indicate that liquidity risk arises from the inability of a bank to accommodate decreases in liabilities or to fund increases in assets. An illiquidity bank means that it cannot obtain sufficient funds, either by increasing liabilities or by converting assets promptly, at a reasonable cost. In periods the banks don’t enjoy enough liquidity, they cannot satisfy the required resources from debt without conversion the asset into liquidity by reasonable cost.

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Under critical conditions, lack of enough liquidity even results in bank's bankruptcy (Group of Studies and Risk Management of Eghtesad Novin Bank, 2008).

The liquidity analysis for the Latvian and Lithuanian commercial banks

To be able to assess a bank's liquidity level it is necessary to analyse the commercial banks' the structure of terms and sums for assets and liabilities, and assess their position of liquidity.

The net liquidity position is calculated using the gap-analysis for each group of terms (up to 1 month, from 1 to 3 months, from 3 to 6 months, from 6 to 12 months, from 1 to 5 years and more than 5 years) and is examined separately.

A positive net liquidity position indicates the surplus of resources in each term group of assets and liabilities. The higher the positive position of net liquidity in the group 'up to 1 month', the higher is the current liquidity of the bank. A positive position of the net liquidity in the long-term groups means that there is a long-term resource deficit. A long-term resource deficit can be covered by the bank's equity. But, in case the bank's equity is insufficient to cover the long-term assets, it could cause problems with liquidity when the time has come to fulfil the long-term liabilities.

A negative net liquidity position in each assets and liabilities term group indicates the surplus of outside funds that are distributed in this term group. The higher the negative net liquidity position of the group, comparing it with the short-term and the long-term groups, the higher is the liquidity risk. The reason for this is that the short-term resources are deployed to the long-term investments. This could result mismatch between short-term liabilities and long-term assets. A negative net liquidity position for the long-term group shows that the long-term resources are used not only for long-term investments, but also for short-term assets. This kind of resource placement is positive for the liquidity of a bank.

A total liquidity position is the gap between assets and liabilities in a total cumulative position and it is calculated by an accruing term sequence.

Konovalova, Kudinska, Rozgina and Zelgalve (2008) consider that in general the term structure of the assets and liabilities give the possibility the surplus resources to distribute between different term groups. This action takes place when long-term resources are transformed into short-term investments or vice versa.

While doing the comparative analysis of imbalanced liquidity risk for commercial banks the author uses the net relative gap. The net relative gap is a relation between the absolute net gap value and total assets amount. Figure 1 shows the changes in net relative gap of Latvian AS

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"LatsBanka" in the analysed years while figure 2 shows the respective information of Lithuanian AB "LatsBankas".

Figure 1 shows that the greatest gaps are with maturity up to 1 month are in the years 2007, 2008, 2012, 2013, which indicates a surplus in the short-term outside funds. The net relative gap in the mentioned years is considerably high: 2007 – 30.80%, 2008 – 35.99%, 2012 – 43.17%, but in 2013 it is 46.24%. It should be noted that Latvian AS "LatsBanka" high negative position of net liquidity (up to 1 month) indicates that the surplus of these resources are divided for ensuring the bank's short-term and long-term asset operations. In the other years Latvian AS "LatsBanka" the net relative gaps with maturity up to 1 month is smaller: 2009 – 21.14%, 2010 – 17.38%, 2011 – 19.85%, but for longer terms - 1 month to 1 year the range of the gaps for all researched years were considerably lower and indicated a better balance of assets and liabilities. The gap-analysis of long-term (longer than 1 year) assets and liabilities indicates the highest mismatch of terms, which is characteristic to a long-term resource deficit, which was found in all analysed years of Latvian AS "LatsBanka". The net relative gap indicators for Latvia's researched bank on term deposits from 1 to 5 years in 2007 was 13.03%, in 2008 it was 23.38% and in 2009 – 12.61%, deposits with a term of more than 5 years and indefinite terms were even higher: 2007 - 28.09%, 2008 - 23.43% and 2009 - 23.13%. It should be noted that from the year 2007 to 2009 Latvian AS "LatsBanka" was in danger, because there was a great imbalance of the short-term liabilities and the long-term assets and that resulted in a higher imbalanced liquidity risk, because the short-term resources were used for financing the assets operations with long terms. In the following years (from 2010 to 2013) the analysis for long-term assets and liabilities (more than 1 year) in AS "LatsBanka" still showed the high imbalance of assets and liabilities and the long-term resources deficit (see fig. 1). On this basis the author can state that from 2008 to 2013 Latvian AS "LatsBanka" had liquidity risk, because a large part of their short-term resources were transformed into long-term investments.

The data in figure 2 indicate that the subsidiary bank, similar to the parent bank, had the highest gap of assets and liabilities in the analysed time period with maturity on demand and up to 3 months. This bank had surplus of short-term resources and this proves that both banks, the subsidiary bank and the parent bank, apply the same liquidity management policy.

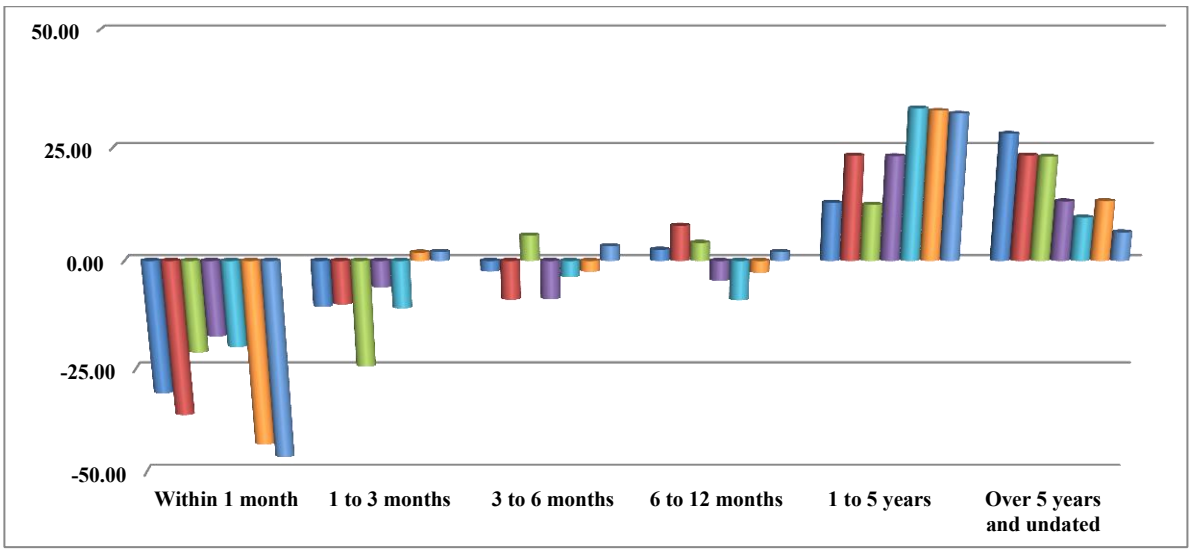

Figure 1. Latvian AS "LatsBanka" Relative Gaps from 2007 to 2013 (%)

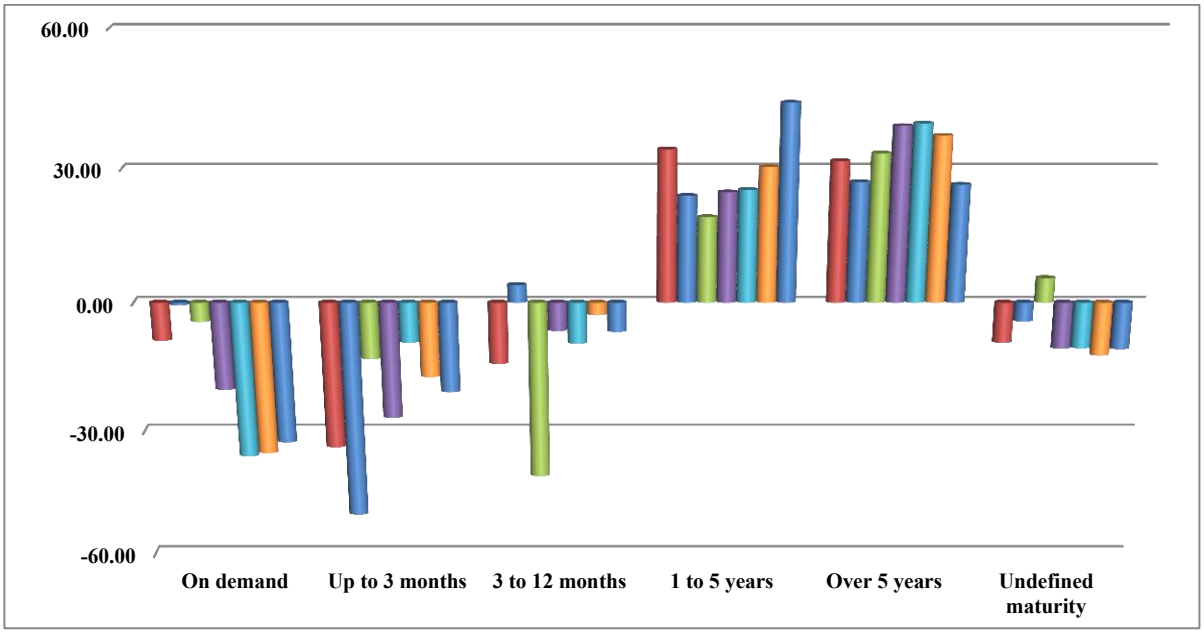

Figure 2. Lithuanian AB "LatsBankas" Relative Gaps from 2007 to 2013 (%)

For longer terms of assets and liabilities (from 3 months to 1 year) Lithuanian bank shortens the gaps diapason in all analysed years, except 2009, when the relative gap from 3 months to 1 year reached 40.88%, pointing out that middle-term resources had a surplus. Similar to the parent bank, Lithuanian bank's long-term assets and liabilities (from 1 to 5 years and more than 5 years) had the highest the imbalance of terms (figure 2). The bank had the long-term resources deficits in all researched years. Therefore AB "LatsBankas" is in serious danger, because the inconsistency of maturity between the bank's short-term liabilities and long-term assets is exceptionally large, which resulted in an increased liquidity risk. The risk increased because the short-term resources were financed by long-term investments.

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Continuing analysis it is important to assess the amount of resources that were turned into long-term assets.

The short-term resources transformation coefficient is determined by the gap of short-term resources and short-term assets in relation to short-term resources. The results of the calculations can be seen in figure 3, which made by the authors. In the period of 2007 to 2013 both analyzed commercial banks had the short-term resource surplus, certain part of which the banks could to transform to the long-term assets. But a group of authors - Konovalova, Kudisnka, Rozgina and Zelgalve (2008) consider that the share of short-term resources, which are turned into long-term investments, must not exceed 20%.

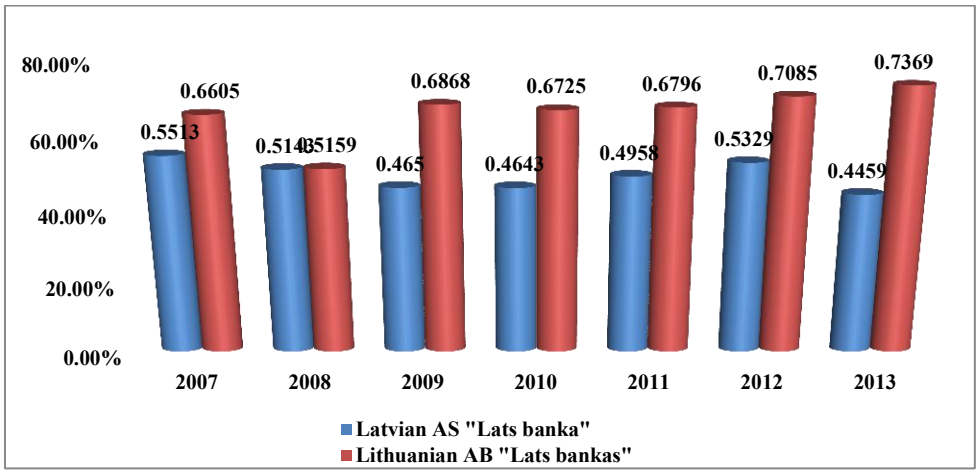

Figure 3. Latvian AS „LatsBanka" and Lithuanian AB „LatsBankas" Resources Transformation Ratio from 2007 to 2013 (%)

The calculated transformation ratios have proved the previously mentioned conclusions of the authors. All researched years showed that both banks had a very high indicator when short-term (up to 1 year) resources were turned into long-term assets (with a term of more than 1 year). Latvian AS "LatsBanka" had very high transformation coefficient in 2007, 2008 and 2012 (53.13%, 51.43% and 53.29%), which indicates the highest liquidity risk in these years. Lithuanian bank had the lowest indicators in 2007 and 2008, which still were three times higher than recommended 20% and were higher than the parent bank's indicators. The short-term transformation ratios show that Lithuanian bank's the short-term resources were turned into long-term investments. The bank increased transformation ratio from 52% into 74% thereby lowering its liquidity in researched time period. The lowest transformation indicator for Latvian AS "LatsBanka" was 44.59% in 2013, but it was still more than recommended 20%. In the previous years the bank's ratios was much higher – 2011 - 49.58% and 2012 - 53.29% thus achieving the level of 2007 and 2008.

In this research the authors also calculated the imbalanced liquidity coefficient. The calculations

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of the imbalanced liquidity coefficients of Latvian and Lithuanian banks for the time period of 2007 to 2013 is shown in figure 4. The calculation of the imbalanced liquidity coefficients confirmed the previously made conclusions regarding the high percentage level of the imbalanced assets and liabilities.

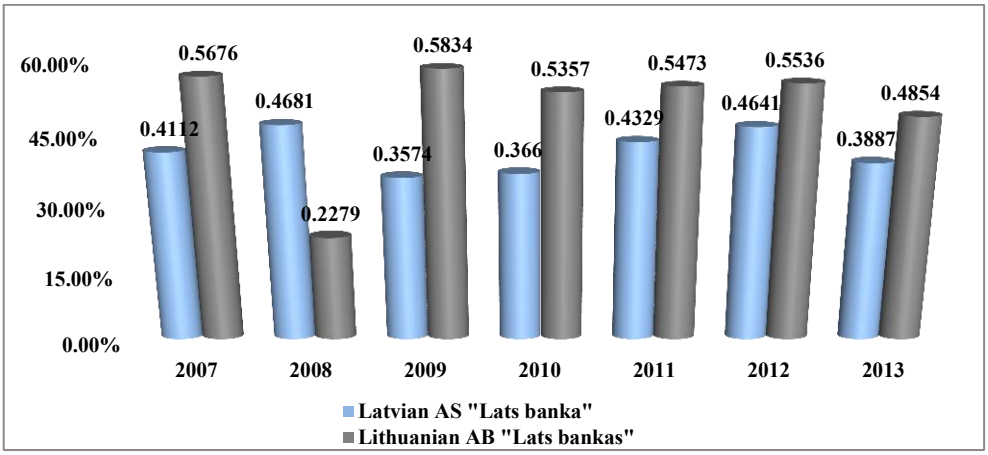

Figure 4. Latvian AS „LatsBanka" and Lithuanian AB „LatsBankas" Liquidity Imbalanced Ratio from 2007 to 2013 (%)

Latvian AS „LatsBanka" the imbalanced coefficient of liquidity had the lowest value in 2009 and 2010, but even in this time period the coefficients were extraordinarily high and that indicates that more than 30% of the bank's assets sum was financed by short-term resources. In 2011 and 2012 the mentioned ratios of Latvian AS "LatsBanka" had increased significantly and in 2012 already exceeded 46%. But in 2013 the bank was able to lower the imbalanced liquidity coefficient till 38.87%. In analyzed period the liquidity coefficient of Lithuanian AB "LatsBankas" had a greater imbalance than the parent bank in Latvia, except in 2008 when this indicator only slightly exceeded 22%.

Latvian AS "LatsBanka" and Lithuanian AB "LatsBankas" banks have a very imbalanced structure of assets and liabilities (figures 3 and 4). Currently both of these banks are not conservative and do not pay enough attention to the management of liquidity risk. The commercial banks had fundamental problems in all researched years regarding imbalanced liquidity, which indicates that the bank's administration does not pay enough attention to the liquidity management of the bank. Both banks have a large amount of resources in the current accounts and term deposits up to 1 month, but the biggest part of short-term deposits is an unstable resource base. Thereby commercial banks that invest in unstable long-term and medium-term investments are subjected to the imbalanced liquidity risk.

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3. CALCULATION OF LIQUIDITY IN ACCORDANCE WITH BASEL III

During the time of the world's financial crisis, which began in mid 2007 (in Latvia – mid 2008), many banks started to implement intensive actions in order to provide the minimum level of liquidity. Before the crisis, the financial systems usually had a liquidity surplus and, because of this, the risk of liquidity and its management were monitored far less than other risks. But the financial crisis showed the speed at which a liquidity crisis can appear and at what speed the financial resources can disappear, thereby increasing the assets assessment problem. The most characteristic sign of the financial crisis was insufficient and ineffective method of managing liquidity risk. Acknowledging the necessity for an increasing level of bank's liquidity risk management and control, the Basel Committee on Banking Supervision (BCBS) developed a new version of Basel III. It provides for the introduction of uniform requirements for the maintenance of a sufficient amount of liquid resources reserve in order to prevent the in the future periods of crisis the high level of insufficiency financial resources. In this case, for commercial banks are offered two new ratios, which regulate the condition of liquid assets:

1. LCR - Liquidity Coverage Ratio
2. NSFR - Net Stable Funding Ratio

The Liquidity coverage ratio (LRC) is an essential element of Basel's III reforms, which is regarded as the liquidity world standard for banks. LRC needs to strengthen global regulations of liquidity management with the objective to stimulate the world-banking sector being stronger. LCR stimulates stability of the banks in the short-term period. According to the requirements of Basel's III, in case of a crisis, the bank's liquid assets reserves should cover the predicted cash outflows in 30 calendar days. These measures will allow banks to have the necessary liquidity level in case unexpected withdrawals of cash or if a bank has troubles receiving a loan in the interbank market. In other words, the LCR will help improve the banking sectors ability to absorb upheavals and lighten the impact from financial and economic strain. LCR can be calculated with the formula 1.

$$\text{LCR} = \frac{\text{Stock of HQLA}}{\text{Total net cash outflows over the next 30 calendar days}} > 100\%$$

Formula 1. The Liquidity Coverage Ratio
Source: Basel III: The Liquidity Coverage Ratio and liquidity risk monitoring tools (2013)

For each element of high quality liquid assets of HQLA were determined the share, which can be applied to calculate LRC:

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Table 1

Illustrative Summary of the LCR

(percentages are factors to be multiplied by the total amount of each item)

Item	Factor
Stock of HQLA	
A. Level 1 assets	
Coins and bank notes	100%
Qualifying marketable securities from sovereigns, central banks, PSEs (Public sector entity), and multilateral development banks	
Qualifying central bank reserves and domestic sovereign or central bank debt for non-0% risk-weighted sovereigns	
B. Level 2 assets (maximum of 40% HQLA)	
Sovereign, central bank, multilateral development banks, and PSE assets qualifying for 20% risk weighting	85%
Qualifying corporate debt securities rated AA- or higher and qualifying covered bonds rated AA- or higher	
Qualifying RMBS (Residential mortgage backed securities)	75%
Qualifying corporate debt securities rated between A+ and BBB-	50%
Qualifying common equity shares	

Source: Basel III: The Liquidity Coverage Ratio and liquidity risk monitoring tools (2013)

Net cash outflow in the next 30 calendar days is established by the BCBS proposed formula 2, where the stress scenario is a severe drop in rating, a partial loss of deposits, the loss of unsecured funding, etc. According to this scenario the cash outflow and inflow is calculated in accordance with the legislative standards (the minimum coefficient for stable deposit withdrawal is 7.5% etc.).

Total net cash outflows over the next 30 calendar days = outflow – inflow

Formula 2. The net cash flow in the scenario of severe stress

Source: Basel III: The Liquidity Coverage Ratio and liquidity risk monitoring tools (2013)

The LCR will be established on the 1st of January 2015 and the minimum requirement at first year shall be 60% (table 2). Furthermore, the LCR requirement will increase by 10% each year, meaning that by 2019 it shall be 100%. This approach shall be used to ensure that the implementation of the LCR occurred without interruptions.

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Table 2

The minimum requirement for the liquidity coverage ratio (%) (from 2015 to 2019)

	2015	2016	2017	2018	2019
Minimum LCR	60%	70%	80%	90%	100%

Source: Basel III: The Liquidity Coverage Ratio and liquidity risk monitoring tools (2013)

On the one hand, 100% of the liquid assets amount greatly increases a bank's ability to fulfil their liabilities; on the other hand, it also greatly decreases the profitability of a bank. The requirements of the LCR are strict and by following them the commercial banks are encouraged to invest their free resources in securities with high liquidity, in order to gain some profit while complying with liquidity requirements. Thus in order to maintain liquidity the commercial banks should to purchase quickly marketable securities, and at the same time, because of the great demand, the stock markets could reduce the coupon payments and discount rates for quickly marketable securities.

The authors have calculated the LCR for Latvian AS "LatsBanka". The LCR has been calculated based on the accessible data of annual reports of Latvian AS "LatsBanka" for 2010, 2011, 2012 and 2013. For the calculations the LCR were used the balance data from annual reports regarding securities, securities portfolio quality and the contractual undiscounted cash flows of the financial liabilities from contracts up to 30 calendar days that apply to financial liabilities of AS "LatsBanka" (Table 3).

While calculating, the authors obtained the following LCR coefficient values: 2010 – 55.11%; 2011 – 56.17%; 2012 – 54.96% and 2013 – 52.22%. The authors' calculations have been shown in table 4 and indicate that Latvian AS "LatsBanka" is not ready to fulfil the requirements of the BCBS from 2015.

Continuing the research it is necessary also look into the other new liquidity indicator, which was proposed by the BCBS - The Net Stable Funding Ratio (NSFR). The objective of NSFR is liquid assets coverage by 100% at the expenses of 1-year stable liabilities. The NSFR planned to be implemented on the 1st of January 2018 (Basel III: The Net Stable Funding Ratio 2014). The NSFR was created that investment assets, off-balance sheets and other securitised assets could to receive financial support by stable liabilities. The purpose of this indicator is to limit the reliance on large financial sources in periods of liquidity surplus and promote the more precise liquidity risk assessments for all sheets of balance and off-balance sheets. This kind of approach will help the commercial banks lower the possibility of a sudden deterioration of the liquidity indicator and prevent the increase of liquid assets reserves on the account through the short-term sources of funding.

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Table 3

The calculations HQLA and LCR of Latvian AS "LatsBanka" from 2010 to 2013

The indicators		Stock of HQLA	2010		2011		2012		2013	
			th.eiro	%	th.eiro	%	th.eiro	%	th.eiro	%
A. Level 1 assets	Coins and bank notes	100%	252 343	50.45	326 775	58.23	248 587	35.52	502860	48.05
	Qualifying marketable securities from sovereigns, central banks, PSEs and multilateral development banks									
	Qualifying central bank reserves and domestic sovereign or central bank debt for non-0% risk-weighted sovereigns	100%	841 87	16.83	153 74	2.74	145 967	20.86	89351	8.54
Level 1 assets total:			**336 531**	67.28	**342 149**	60.97	**394 545**	**56.38**	**592211**	**56.59**
B. Level 2 assets (maximum of 40% HQLA)	Sovereign, central bank, multilateral development banks, and PSE assets qualifying for 20% risk weighting	85%	145 372	29.07	177 125	31.56	284 144	40.6	351324	33.57
	Qualifying corporate debt securities rated AA- or higher and qualifying covered bonds rated AA- or higher	85%	254 5	0.51	267 30	4.76	592 4	0.85	35819	3.42
	Qualifying corporate debt securities rated between A+ and BBB-	50%	157 10	3.14	151 71	2.70	151 71	2.17	67189	6.42
Level 2 assets total:			**163 627**	32.72	**219 026**	39.03	**305 238**	**43.62**	**454333**	**43.41**
Level 2 excess over 40% of HQLA			-	-	-	-	**-25321**	**-3.62**	**-35687**	**-3.41**
Total value of stock of HQLA:			**500 158**	100.00	**561 175**	100.00	**674 471**	100.00	**1046544**	100.00
Total net cash outflows over the next 30 calendar days			907496		999050		1227203		2004018	
LCR			**55.11%**		**56.17%**		**54.96%**		**52.22%**	

The NSFR is calculated by the formula 3 (Basel III: The Net Stable Funding Ratio 2014).

$$\textbf{NSFR} = \frac{\textbf{Available amount of stable funding (ASF)}}{\textbf{Required amount of stable funding (RSF)}} \textbf{ >100\%}$$

Formula 3. The Net Stable Funding Ratio

Source: Basel III: The Net Stable Funding Ratio (2014)

The gist of the NSFR is: the greater is the amount of the non-liquid assets in the bank, the greater is the necessity for a secure and stable financial support because the stable resources outflows would be less probable and it would allow using these resources as financial support of non-liquid assets in stress situations.

Unfortunately, the authors were not able to calculate the NSFR, because did not have the necessary data in annual reports of the researched banks. Taking into consideration that the NSFR will be introduced only in 2018, therefore NSFR calculations are not topical for this research.

The main discussion in the financial sector about NSFR:

- The possible reduction the commercial banks' ability to offer long-term loans because of difficulties of finding long-term resources in the interbank markets.
- The possible risk that the bank sector refuses to give out to companies long-term loans.
- The increase of securitisation operations in order to avoid the long-term financing of loans for private sector.
- The increase costs of refinancing in the interbank markets.

All of the previously mentioned discussion topics are very important to commercial banks and the national economy and the reason for this is that the main role of commercial banks – resource redistribution, is becoming impracticable. The implementation of the NSFR will not allow the commercial banks to lend the companies, because the banks will be unable to ensure a large and stable amount of resources to finance less- or non-liquid assets. That is why, the authors' point of view that the discussions in the international finance sectors regarding the NSFR are reasonable and the BCBS should make corrections before the new requirements will enter into force.

4. CONCLUSIONS

1. By taking into account the results of the gap-analysis, it was ascertained that the Latvian and Lithuanian banks have a surplus of short-term resources. A high negative net position of short-term liquidity is proof that these surplus resources have been transformed into long-term asset operations.
2. The net relative gap-analysis of long-term assets and liabilities shows that the analysed banks have a long-term resources deficit.
3. The short-term liquidity of both banks was in danger. The reason for this was that the imbalance between the short-term liabilities and the long-term assets was very big.
4. The calculation of the short-term resources transformation coefficient allowed the author to discover that both of commercial banks had transformed short-term resources into long-term asset operations thus decreasing banks' liquidity. The value of the coefficient shows that the lack of long-term resources in the Lithuanian subsidiary bank was so great that in case of a crisis situation the

bank will be unable to ensure that all of the liabilities are fulfilled and it may result the bank insolvency.

5. The calculations of the imbalanced liquidity coefficient have proven that the researched commercial banks have a high imbalance level of assets and liabilities. The risk of an imbalanced liquidity shows that the researched banks' liquidity is in critical condition, because of the transformation of short-term resources into long-term assets.

6. It was ascertained that both banks had a large amount of resources in their current accounts and term deposits from 1 to 3 months, where the biggest share of short-term deposits is an unstable resource base of the banks. By investing the unstable resources into long-term and middle-term assets the analysed commercial banks take for themselves a high imbalanced liquidity risk.

7. According to the new indicator - LCR of Basel III, the authors came to a conclusion that Latvian AS "LatsBanka" is still not ready to comply with the BCBS requirements by 2015.

Based on the acquired results and conclusions, the authors have worked out suggestions that could be beneficial to the liquidity management of the researched Latvian and Lithuanian commercial banks.

1. In order to control the liquidity risk, the authors suggest to the banks to use the imbalanced liquidity coefficient and liquidity gaps. Based on the gap-analysis it is possible to evaluate the liquidity position of the bank.

2. Both commercial banks should develop and regularly supervise their restrictive limits for the gaps positions, thus it allows them to determine the necessary amount of liabilities or assets for specific term groups and regulate these positions.

3. After detection the high coefficient of the short-term resource transformation, the authors recommend for both banks promptly to change their liquidity management policy and to give priority attention to attracting long-term resources. That will be exceedingly necessary in maintaining long-term liquidity. Long-term resources can be increased through the following tools:

- attracting syndicated loans;
- issuing stock or long-term debt securities;
- increasing the share capital;
- offering to regular clients more favourable term deposit conditions when concluding a long-term contract.

4. Considering the high coefficient of short-term resource transformation of the Lithuanian bank, it is recommended to make an asset restructuring or to sell part of assets (e.g.: to sell the real estate) or limit issuing of long-term loans.

5.Both researched banks should focus on issuing short-term loans (up to 1 year) or to offer their clients the possibility to shorten the term of loan with lowering the interest rates. Thereby lessening the imbalance between the short-term resources and the long-term assets.

6.The authors recommend not transform the surplus of the short-term resources into long-term assets, but in moderate amounts resources should be invested into the short-term loans in the interbank markets, into the reserve in Central banks or correspondent accounts (foreign banks) and for the purchase of liquid securities. Thereby it will become possible to achieve a balance between assets and liabilities by maturities.

7.It is recommended to do the regular stress-testing, undergo simulations of problematic situations, as well as verify the researched banks' liquidity, solvency and durability against various stress situations.

8.The commercial banks should perform the short-term liquidity planning in accordance with the cash flows based on the new requirements of Basel III. This is especially recommended for Lithuanian subsidiary bank, which, at this point does not make or not publish contractual undiscounted cash flows of the financial liabilities from contracts up to 30 calendar days.

9.It is recommended for Latvian AS "LatsBanka" increases the amount of liquid securities till 2015 in order to increase the LCR to the minimum of 60%. Beginning with 2015 Latvian AS "LatsBanka" should increase the amount of high liquid assets by 10% each year until their liquidity coverage ratio reaches 100% by 2019. Compliance with these demands will allow the bank to endure powerful cash outflows in crisis situations and finding a way to overcome the deficiency of liquidity assets.

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EVALUATION OF ENTEPRISE SOLVENCY IN LENDING PRACTICE OF COMMERCIAL BANKS: EVIDENCE FROM LATVIA

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Abstract

Design/methodology/approach - The authors describe the concept and the evaluation of enterprise solvency, the overview of credit risks and creditworthiness is provided, as well and the credit risk control and management methodologies are described. The description of the trends of lending and the analysis of lending portfolios of commercial banks in Latvia are given, as well as the results of the survey are analyzed.

Findings – There is a certain gap between scientific approaches to evaluation of solvency and the approaches used by commercial banks in their lending practices. In the regular analysis and monitoring of solvency ratios of enterprises, as well as performing analysis of the reasons of their change, there is a higher chance of timely recognition of the threat of insolvency for a particular enterprise. The most known and widely applied is so called "classic" approach to the construction of insolvency models, which is based on the multiplicative discriminant analysis. However, several crucial flaws of insolvency models based on multiplicative discriminant approach, do not allow efficient application of these models in practice.

Originality/value – the paper suggests switching from insolvency prediction models based on multiplicative discriminant analysis in favor of modern econometric instruments (for example models based on logit regressions approach). These models are not applied in lending practices of Latvia commercial banks.

Key words: solvency, lending, loan portfolio, credit risk, creditworthiness.

1. INTRODUCTION

Nowadays commercial banks constitute one of the most important parts of market economy, and their development is vital for economic development of any country. Lending stimulates the development of industry and production. Without the lending development of commercial enterprises and other types of business activity it would not be possible within a single country and internationally.

One of the key conditions of successful functioning of commercial banks is effective risk management, out of which credit risk management is the most important. Loan issues are successful when creditworthiness of borrowers, i.e. their ability to service debt obligations, is evaluated objectively. The essence of creditworthiness is the financial stability of borrowers or "solvency".

Global financial crisis illustrated, that not only commercial banks, but also borrowers should constantly monitor their own financial position, as well as lenders should regularly check the financial stability of borrowers. Worldwide economic globalization increases uncertainty with

respect to individual enterprises and their financial independence. Therefore the problem of predicting the likelihood of default of enterprises is topical in Latvia.

There is a certain gap between the scientific approaches to evaluation of solvency and the approaches used by commercial banks in their lending practices. In the case of regular analysis and the monitoring of solvency ratios of enterprises, as well as performing analysis of the reasons of their change, there is a higher chance of timely recognition of the threat of insolvency for a particular enterprise. The most known and widely applied is so called "classic" approach to the construction of insolvency models, which is based on the multiplicative discriminant analysis. However, several crucial flaws of insolvency models based on multiplicative discriminant approach, do not allow efficient application of these models in practice. As a result, many financial management practitioners had to switch from insolvency prediction models based on multiplicative discriminant analysis and in favor of modern econometric instruments (for example models based on logit regressions approach), and these models are not applied in lending practices of Latvia commercial banks.

Credit risks of commercial banks increase proportionally to the growth of their lending portfolios, so qualitative evaluation of the solvency level allows commercial banks to evaluate creditworthiness of an enterprise and reduce credit risks more effectively. The subject of the research is the process of evaluation of solvency of enterprises in the activities of commercial banks.

The aim of the paper is to analyze different methods of evaluation and prediction of enterprise solvency and develop suggestions for the improvement of the lending practices of commercial banks based on the theoretical concepts of the evaluation of the solvency of enterprises.

In order to reach the aim, the paper describes the concept and evaluation of enterprise solvency, provides the overview of the concepts of credit risks and creditworthiness as well as the description of the trends of lending in Latvia and the results of the surveys are analyzed.

In order to reach the goal of the research both quantitative and qualitative research methods have been used. Qualitative research methods included theoretical comparison, analysis and synthesis, expert interviews, personal observations of the authors, as well as two surveys are performed for the analysis of the research of the problem and evaluation of the assumptions used in the research. Quantitative research methods included the analysis of statistical data and financial calculations.

2. CONCEPT OF ENTERPRISE SOLVENCY AND ITS FORECASTING MODELS

Enterprise solvency is one of the most important financial ratios, correct management of which ensures sound operations and further development of an enterprise. Solvency is defined by foreign dictionaries as a situation, when assets of a person or an enterprise exceed obligations, as well as largest share of assets consists of cash or cash equivalents (Black, 2002).

Each enterprise should be regularly monitored in order to determine signs of possible insolvency, to be able perform actions to avoid it. Additionally, it is necessary to determine factors affecting financial state of an enterprise to be able to understand their possible adverse effect on its solvency and take corrective actions if needed (Needles, 2005).

Evaluation of solvency of an enterprise could be based on various elements of annual reports, financial ratios, coefficients and solvency forecasting methodologies. Factors affecting solvency are divided into internal and external factors. External factors are beyond control of the enterprise, while internal factors are highly dependent on the management of the enterprise, and include lack of management experience, low level of professional competence, inability of objective evaluation of market changes, incorrect decisions and other.

British finance practitioner B.Rees (1995) has systematized ratios, which could point deterioration of financial position of an enterprise. He has divided internal factors into three groups: related to operational activities, related to investment activities and related to financing

activities. External factors that are related to the environment of the operations of an enterprise should be considered in for solvency management. Several scientists have studied external factors affecting solvency. American scientists G.Newton (2003) has determined key external factors affecting it: economic changes, competitive environment, government regulations and technological changes. R.Schneidere (2009) has added additional external factors related to changes in the commercial environment – both Latvia joining EU and introduction of euro in Latvia should be taken into account.

Signs, causes and influencing factors of solvency of borrowers should be regularly analyzed by both lending specialists and managers of enterprises, as well as insolvency risk reduction procedures should be developed to maintain financial stability of borrowers.

Foreign specialists have mostly common definitions of solvency. E.Altman, professor of the University of New York, (1999) defined solvency as state when cash flow of an enterprise is enough to cover short term obligations as well as assets of a enterprise exceed its obligations – positive net equity. American economist D.Chorafas (2001) considers enterprise to be solvent when the largest share of its assets is enough to cover all its liabilities. Lithuania professor J.Mackevicius (1998) defines solvency as ability of an enterprise to timely cover all its liabilities with current financial resources. Russian author and economist A.Bobileva (2004) defines solvency as ability to meet all financial obligations in time.

Overall, economists and scientists define solvency to be related to the ability of an enterprise to meet all its short term and long term liabilities using current financial resources, as well to operational activities, which create enough resources to timely service obligations.

In order to keep enterprise solvent, it should be managed properly. Solvency management implies evaluation of signs, causes and affecting factors of solvency, as well as monitoring, analysis and forecasting of financial ratios and coefficients and development of methodologies for maintaining solvency and improving enterprise financial position at times of troubles.

Not only enterprise management, but also external parties, such as investors and banks, are interested in the solvency valuation of enterprises. Before granting loan financing, bank should verify creditworthiness of the borrower, meaning ability of the borrower to service debt obligations. Borrowers' creditworthiness has always been the key object of evaluation in banking industry (Zelgalve, 2005). Insolvency of enterprises is not only harmful for financial institutions, it eventually adversely affects general economic development.

Financial analysis in general is analysis of financial statements of an enterprise in order to perform objective evaluation of its solvency and make forecasts of its changes. Performance of an enterprise is highly dependent on the effectiveness of utilization of its financial resources. The goal of financial analysis is to define and evaluate factors, which can negatively affect financial performance of an enterprise (Needles, 2005).

When performing financial analysis, its purpose and area, as well as analyzed ratios and future solvency expectations should be defined. Deterioration of financial position of an enterprise is related to:

- Shortage of cash;
- Losses;
- Reduction of liquidity and solvency;
- Increases financial risks(Zelgalve, 2005).

Financial analysis consists of following steps:

Step 1. Introduction to accounting policies of an enterprise, for example methodologies for stock accounting, direct and indirect costs calculation, as well as methods of evaluation of cost of separate products. The step implies information gathering and express analysis of financial statements.

Step 2. Second step is related to processing of financial statements in a way that would allow analysis of liquidity, solvency and profitability ratios, as well as evaluation of capital intensity as levels of investment and financial risks. Data analysis is based on the system of financial ratios.

Step 3. Detection of trends and tendencies in the development of an enterprise based on dynamics of financial results.

Step 4. Description of development dynamics and reasons of structural changes, as well as development of suggestions reduction of the influence of adverse factors in the future.

Use of financial ratios is vital for forecasts and actual results evaluation, as well as peer comparison.

Performing financial analysis, loan specialists should pay attention to the forecasted financial results, as well as underlying assumptions. Key financial ratio to be considered(Needles, 2005):

Debt service coverage ratio (DSCR) = EBITDA/ annual loans payments, (1)

where

EBITDA – earnings before interest, tax, depreciation and amortization

The ratio illustrates ability of enterprise to service its debt obligations from profits (EBITDA). The ratio should exceed 1.

Net Debt/ EBITDA – the ratio illustrates debt burden of an enterprise in relation to its profitability.

In the case when proper management actions to maintain and improve financial position of an enterprise are not taken, there is a threat of enterprise becoming insolvent. There are two states of insolvency – analytical or actual insolvency and legal insolvency. Legal insolvency is the one declared by court when an enterprise defaults on its obligations. Analytical insolvency is related to enterprise not being able to service its obligations based on information on its financial position of financial statements. This type of insolvency could be recovered by financial management actions (Šneidere, 2009).

Enterprise solvency forecasts are based on balance sheet, profit and loss statement and cash flow statement of an enterprise, as well as financial ratios, coefficients and solvency forecasting models are applied. Enterprise solvency analysis often includes trend analysis of the changes of specific accounts of financial statements.

However, calculation of financial ratios, tracking of their changes and comparison to other enterprises alone does not provide full information regarding the level of possibility of insolvency and default. More precise evaluation of probability of insolvency is derived using solvency forecasting models based on combinations of financial ratios. Solvency forecasting models have been studied by American economists Beaver, W.(1967), Altman, E.(2000), Fulmer, J.(1984), White, G., Sondhi, A., Fried, D.

(1994); Canadian economist Springate, G. (1978) , Tafler, R. (1984) from Great Britain, G. Savicka from Belarus, as well as the topic was studied by I. Voronova, I. Genriha (2009), R. Šneidere (2009), I. Mavlutova (2012) and other in Latvia.

Most popular author of solvency forecasting models E.Altman (2000) used different combinations of financial ratios and first applied multiple discriminant analysis (MDA). Financial ratios included in the model were divided in four groups – liquidity, profitability, solvency and activity. For each group the model included most important financial ratios with the largest difference between solvent and defaulting enterprises. As a result, multifactor regression was created – Z model:

$$Z = 0{,}012\ X_1 + 0{,}014\ X_2 + 0{,}033\ X_3 + 0{,}006\ X_4 + 0{,}999\ X_5, \quad (2)$$

where:

X_1 – working capital / total assets;

X_2 – retained earnings / total assets;

X_3 – earnings before interest and taxes / total assets;

X_4 – share capital market value / balance value of liabilities;

X_5 – net turnover / total assets.

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Testing Z-model, E.Altman concluded that model is capable of predicting insolvency one to five years ahead. The closer to the default, the higher predictive power the model has – one year before insolvency its predictive power is close to 95%, while five years before only 36%.

E.Altman has derived insolvency possibility scale based on Z-score value:

- Up to 1,8 – very high probability of insolvency
- From 1,8 to 2,7 – high probability of insolvency
- From 2,8 to 2,9 – average probability of insolvency
- More than 3,0 – very low probability of insolvency.

Regardless of the benefits of the mode, its application is complicated due to omission of country related and industry specific factors, as well as the model is designed for public companies. Therefore modified models based entirely on financial ratios from financial statements have been derived. E.Altman has created Z' and Z" models for non-public companies:

⇨ Z' – for large industrial companies;

⇨ Z'' – for small companies in various industries.

Other economists have also created MDA models: British economists R.Tafler and H.Tishow (Tafler, 1984) have created four factor model, American economist G.Fulmer (1984) developed nine factor model, Canadian economist G.Springate (1978) has developed four factor model, however one of the best known solvency models for transition economies is five factor model by economists from Moscow University R.Saifulin and G.Kadikov. Analyzing these models, it could be concluded that model structure is mostly common and the models include ratios of liquidity, liabilities, profitability and activity (see Table 1).

Several specialized models for solvency forecasting have been created in the latest years. All available solvency forecasting models could be classified in following groups (Minussi, Soopramanien, Worthington, 2007):

- models based on multiplicative discriminant analysis;
- models based on logarithmic regressions (or logit-models);
- models based on scoring approach;
- models based on rating valuations.

Due to a number of shortages of multiplicative discriminant solvency forecasting models, many economists switched in favor of other modern approaches to solvency forecasting, including models based on logarithmic regressions (logit models) (Begley, Ming, Watts, 1996).

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Table 1

Financial ratios included in most popular solvency forecasting models

Included financial ratios	E. Altman Z`	E. Altman Z``	R. Tafler H. Tishow Z	D. Fulmer H	G. Springate Z	R. Saifuļin G. Kadikov R
Working capital / total assets	x	x			x	
Retained earnings / total assets	x	x		x		
Earnings before interest and taxes / total assets	x	x			x	
Equity / liabilities	x	x				
Net turnover / total assets	x		x	x	x	
Current liabilities / assets			x	x		
Liabilities / assets				x		
Current assets / current liabilities						x
Earnings before tax / current liabilities			x		x	
Current assets / liabilities			x			
Earnings before tax / equity				x		
Cash flow / liabilities				x		
Fixed assets / total assets				x		
Current assets / liabilities				x		
Earnings before interest and taxes/interest paym.				x		
Working capital						x
Asset turnover ratio						x
Net profit / net turnover						x
Net profit / equity						x

Source: prepared by the authors

Logarithmic regression model is applied in order to solve the task of forecasting value of constantly dependant variable, which can be between 0 and 1. Due to specifics of the variable it is often used as an estimate of the probability of an event dependant of a number of factors. In comparison to MDA models, which can only determine qualitative probability of default, logit models do not have the problem of interpretation of the result, as it is bounded between 0 and 1, and therefore determines nominal value of probability of default. In addition, there is no uncertainty area in logit models, which is attributable to discriminant analysis models. If probability of default takes values of more than 0,5 event of default is considered as likely. Expert performing enterprise financial analysis can subjectively define the value of this border (Lennox, 1999).

Probability of default in the logit model is calculated based of logarithmic function:

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$$P = \frac{1}{1 + e^{Y}}, \quad (3)$$

where

P – probability of default between 0 and 1);
e – natural logarithmic base (equal to 2,71828);
Y - coefficient – integral ratio which is calculated based on model specification.

D.Cesser (Chesser, 1974) designed borrower default probability valuation model, specifically for banks. Mathematics applied by D.Ceser in his model is very similar to those used by other economists for models described below. In his model D.Ceser calculates integral ratio Y based on six variables representing liquidity, profitability and financial stability factors of an enterprise:

$$Y = -2{,}0434 - 5{,}24\,X_1 + 0{,}0053\,X_2 - 6{,}6507\,X_3 + 4{,}4009X_4 - 0{,}0791\,X_5 - 0{,}1220X_6, \quad (4)$$

where

X1 – cash and cash equivalents as a share of total assets;
X2 – sales as a share of cash and cash equivalents;
X3 – gross profit as a share of total assets;
X4 – borrowed funds as a share of total assets;
X5 – share capital as a share of net assets;
X6 – working capital as a share of turnover.

Integral ratio Y is then used for calculation of the probability of default, as in all similar logit models (in Cesser model – probability of default on loan obligations). Interpretation of the quantitative result for probability of default is performed based on following intervals:

1. if P <0,5, then probability of default is low;
2. if P> 0,5, then probability of default is high;
3. if P=0,5, interpretation is subject to expert opinion.

Ohlson model (Ohlson, 1980) is illustrated in Table 2.

Table 2

Most popular default forecasting models based on logit regression analysis

Model author (year)	Country, sample size (period)	Integral ration formula
Ohlson (1980)	USA, 2163 (1970-1976)	$Y = -1{,}32 - 0{,}407 \times SIZE - 6{,}03 \times TLTA - -1{,}43 \times WCTA + 0{,}0757 \times CLCA - -2{,}37 \times NITA - 1{,}83 \times FUTL + +0{,}285 \times INTWO - 1{,}72 \times OENEG - 0{,}521 \times CHIN$
Begley, Ming, Watts (1996)	USA	$Y = -1{,}249 - 0{,}211 \times SIZE - 2{,}262 \times TLTA - -3{,}451 \times WCTA - 0{,}293 \times CLCA - -0{,}907 \times OENEG + 1{,}080 \times NITA - -0{,}838 \times FUTL + 1{,}266 \times INTWO - 0{,}960 \times CHIN$
Joo-Ha, Taehong (2000)	South Korea, 46 (1997-1998)	$Y = 0{,}1062 \times INT / TR - 0{,}00682 \times EBIT / TL - -0{,}1139 \times TR / REC$
Ginoglou, Agorastos (2002)	Greece, 40 (1981-1985)	$Y = -0{,}138 + 16{,}555 \times NP / AT + 3{,}54 \times GP / AT + +0{,}002 \times TL / EQ + 0{,}789 \times (AC - SL) / AT$

Gruszczynski (2003)	Poland, 46 (1995)	$Y = 1,3508 + 7,5153 \times OP / AT - 6,1903 \times TL / AT$
Lin, Piesse (2004)	United Kingdom, 77 (1985-1995)	$Y = -0,2 - 0,33 \times NP / AT - 0,17 \times CASH / TL - -0,95 \times (AC - SL) / AT$
Altman, Sabato (2007)	USA, 432 (2003-2004)	$Y = 4,28 + 0,18 \times EBIT / AT - 0,01 \times SL / EQ + +0,08 \times NP / AT + 0,02 \times CASH / AT + +0,19 \times EBIT / INT$

Source: Korol,2011

where:

SIZE – size of enterprise, which is calculated as natural logarithm of total assets divided by GDP deflator;

TLTA – total liabilities as share of total assets;

WCTA – working capital as share of total assets;

CLCA – current liabilities as share of current assets;

NITA – return on assets;

FUTL – working capital as share of total liabilities;

INTWO – dummy variable, which takes value 1 if enterprise net profit was negative two last years, and 0 in the other case;

OENEG – dummy variable, which takes value 1 if current liabilities exceed current assets and 0 in the other case;

CHIN – change of net profits during last two years;

$$CHIN = \frac{NI_t - NI_{t-1}}{|NI_t| + |NI_{t-1}|}, \quad (5)$$

Where

NI_t - net profit in period t.

AC – current assets;

AT– total assets;

TL– total liabilities;

SL– current liabilities;

LL– long term liabilities;

EQ– equity;

REC– debtors;

TR– net turnover;

NP– net profit;

GP– gross profit;

OP– profit before tax;

INT– interest payments;

OC– administrative and sales expenses;

EBIT– earnings before interest and taxes;

CASH– cash.

Economists I.Genriha and I.Voronova have developed new default forecasting model for Latvian enterprises using regression analysis based on three financial ratios (Genriha, Voronava, 2009):

$$Z = 25,998K_1 + 33,358K_2 + 16,208K_3 - 5,662, \quad (6)$$

where
K_1 – Profit before tax / Equity;
K_2 – Net turnover / Assets;
K_3 – Long term liabilities / Assets;
Z - Score based on weights of regression model

$$PD_i = \frac{1}{(1+e^{-Z})}, \quad (7)$$

where
PD_i – probability of default in during year for enterprise i
e – natural logarithmic base (equal to 2,71828)
Z - Score based on weights of regression model

The model calculates probability of default, which estimates probability of enterprise becoming insolvent during one year. The model shows better predictive power with respect to Latvian enterprises compared to other models.

3. OVERVIEW OF LENDING AND CREDIT RISK

Loan is one of the most popular external financing types nowadays, which significantly influences financial position and solvency of an enterprise. Commercial banks grant loans following strict lending principles and policies, described by lending policy of each bank, which are essential at every stage of lending (loan application evaluation, loan granting, loan issue, monitoring). Lending policy is the most important instrument for management and control of credit risks.

Authors of the paper believe that loan products offered in Latvia cover needs of all types of enterprises and there is a broad range of loan products to choose for any type of financing needs. In the banking field risk is related to reduction of profits and equity. Financial risks appear from depreciation of assets, liabilities and options. Credit risk is a possibility of losses or reduction of profits of commercial banks due to inability of debtors/borrowers to repay their obligations (Mackintosh, Costello, 1996). Large share of this risk is industry risk, which is related to uncertainty of development of the industry operations of the borrower, as well as risk related to the location of the borrower and/or collateral. The later if especially crucial for international lending when the risk is associated with country specific risks. Credit risks are controlled based on guidelines prepared by the Basel Committee on Banking Supervision.

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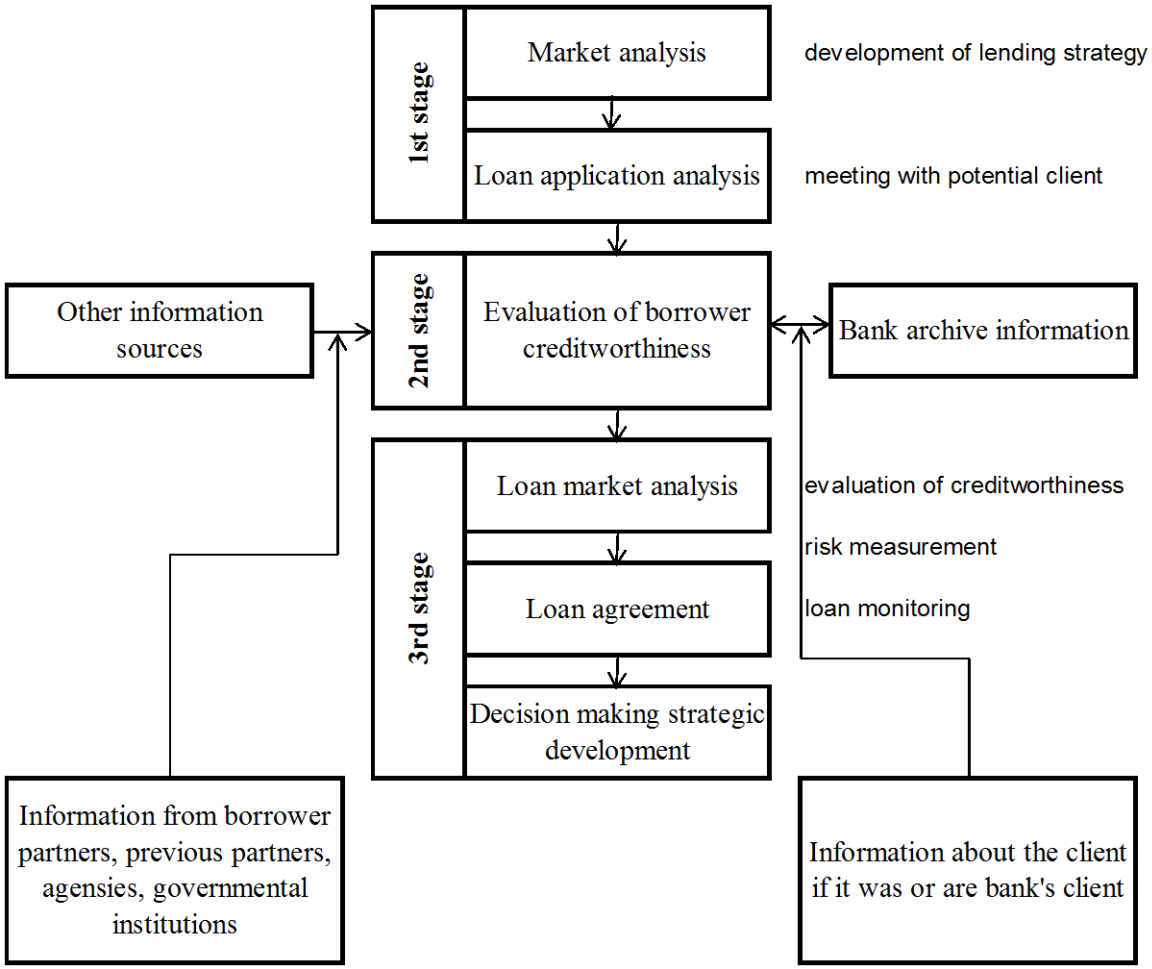

Figure 1. Stages of lending process

Source: Pogorelenko, 2010

Lending is one of the main asset management activities of commercial banks and lending portfolio is one of the most important parts of the assets of commercial banks. Therefore successful implementation of lending policy, lending portfolio management and credit risks management are vital for successful operations of commercial banks.

Credit risk could be divided into four categories, each associated with a set of sources, as described in Table 3.

Variety of sources of credit risks illustrates complexity of loan granting process, which exceeds classic financial analysis of the borrower.

In order to effectively control credit risk, each commercial bank should develop clear lending policy, which will help evaluation and minimization of credit risk in lending portfolio of the bank. Naturally, each enterprise should evaluate its own credit and other risks before applying for financing.

Risk management is a system of economic and financial relationships, which affects level of risks by use of financial instruments and specific strategies. Steps of credit risk management: identification of factors of credit risk, quantification of credit risk, choice of risk strategy, risk control and use risk mitigation tools

(Kudinska, 2008). The main condition for effective credit risk management is creation of suitable credit risk management environment, as well as definition of clear loan granting criterions, constant loans administration and supervision, competent monitoring and control. This field is supervised by the Financial and Capital Market Commission (FCMC).

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Table 3

Description of the sources of credit risk

Nr.	**Risk**	Nr.	**Description of the source of the risk**
1.	Risks related to the borrowers		
1.1.	Objective risk (risk of financial capacity)	1.1.	Inability of borrower (guarantor, insurer) to meet its obligations from current profits and selling assets;
1.2.	Subjective risk (reputational risk)	1.2.	Reputation, responsibility and readiness of borrower (guarantor, insurer) to meet its obligations;
1.3.	Legal risk	1.3.	Imperfections in loan (guarantee, insurance) agreements;
2.	Risks related to collateral		
2.1.	Liquidity risk	2.1.	Impossibility to sell collateral object;
2.2.	Risk of economic development	2.2.	Possibility of depreciation of collateral during the term of the loan agreement;
2.3.	Risk of full damage	2.3.	Full damage of collateral object;
2.4.	Legal risk	2.4.	Imperfections in collateral agreements;
3.	Systematic risk	3.	Changes in economic system, which might affect financial position of borrower (ex. changes in tax policies);
4.	"Force majeure" risk	4.	Earthquakes, floods, other natural catastrophes, stikes, wars, etc.

Source: Lavrushin, 2003

Proper credit risk evaluation, which is based on correct creditworthiness evaluation, is crucial for successful operations of commercial banks. Borrower creditworthiness is the key object of valuation for commercial banks. Ability to service its obligations is associated with customer moral principles, competence and field of operations, value of real estate in its property, ability to generate profits for servicing obligations.

According to the definition of FCMC (FCMC, 2010), creditworthiness is willingness and ability of borrower to service its obligations in accordance to the conditions of loan agreements.

Nowadays views of economists with respect to creditworthiness could be classified as follows(Chaplinska, 2011):

1. Main emphasis is on the moral aspects of relations with borrowers;
2. Basis of creditworthiness is assumed to be ability to generate profits for servicing obligations.

However, creditworthiness primarily assumes that the main condition for repayment of the loan is ability to generate profits from the borrowed resources. Overall creditworthiness could be defined as absence of default and effective use of borrowed resources, with the latter being most important for sustainable long term development of enterprises and thus important to be considered in lending practices. Such definition of creditworthiness is impossible without analysis of financial ratios and

indicators of an enterprise as well as its creditworthiness maintenance. Correct management of creditworthiness is especially important during the period of loan application and repayment.

The first stage is borrower and its business project evaluation. There are several methodologies of evaluation of financial positions and trustworthiness of potential borrowers, which are usually called base principles of successful lending (CAMPARI system, PARTS system, 5-C system and other). By applying these methodologies, as well as based on knowledge and experience, lending specialists of banks are able to evaluate loan applications. Names of these methodologies are derived from base principles included

(Kudinska, 2008):

CAMPARY system:

Character (customer character);

Ability (ability timely and fully service loan obligations);

Margin (profitability);

Purpose;

Amount;

Repayment (repayment terms);

Insurance.

PARTS system

Purpose

Amount

Repayment (repayment terms)

Term

Security

5-C system

Capacity (ability timely and fully service loan obligations)

Character (customer character)

Capital (capital of customer)

Conditions (operations of operations)

Collateral

Overall, lending is essential for economic development, especially for enterprises, as it can stimulate faster development of entrepreneurship. Banks offer various types of lending products for all sorts of financing needs. While receiving profits from lending activities, commercial banks take on risks associated with it, especially credit risk. Evaluation and control of credit risk is one of the most important activates to be performed by commercial banks to maintain successful operations. The key aspects of risk management are diversification of risks and objective evaluation of creditworthiness of borrowers.

4. LENDING TRENDS AND SOLVENCY OF ENTERPRISES IN LATVIA

Landing plays important role in the economic development of Latvia, although commercial banks are taking conservative management approach. Over the years influence of European Union on Latvian banking sector has changed. Before 2004, EU influenced introduction of common European legislation principles in Latvia. After accession to EU, no major changes happened in the banking sector, as Latvian banking sector has been operating in accordance to European standards and legislation already several years.

Currently 20 local and 9 foreign commercial banks are operating in Latvia and banking industry is one of the most developed in Latvia. Since regaining independence in 1991 Latvian banking industry has substantially evolved and developed to offer world class level services to customers, including transition to euro starting from January 1, 2014. The capital of Latvian banks is mainly from Scandinavia and CIS countries. Although up to 2011 Latvian banking industry felt strong, successfully overcoming financial crisis of 2008-2010, bankruptcy of Latvijas Krajbanka in 2011 highlighted existing problems.

Maintaining stable asset base, banks gradually try to balance loans with deposits. Total lending portfolio has gradually decreased due to write off of bad debts, while deposits grew reaching maximum value in the end of 2011, when growth rate reached 13% compared to the before crisis level of 2008.

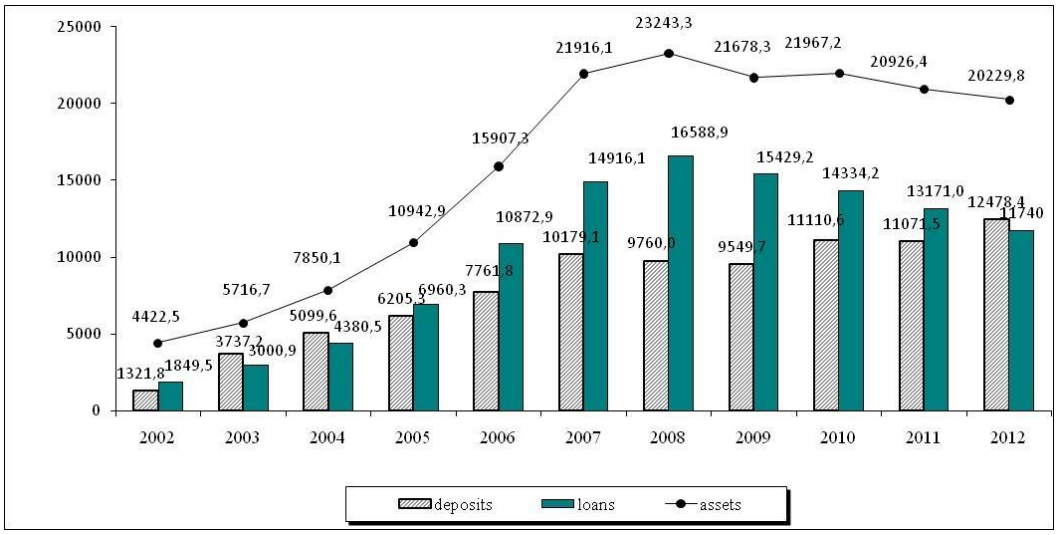

Figure 2. Dynamics of deposits, lending portfolio and total assets of commercial banks in Latvia in 2002-2012, mln LVL

Source: FCMC, 2013

Quality of lending portfolio of Latvian banks has gradually improved mainly due to write off of "bad" debts, as well as more active lending activity and improvement of financial positions of borrowers associated with overall economic recovery. Due to active lending, it is hard for commercial banks to avoid default of loans, or credit risk. While it is impossible to eliminate credit risk, there are ways to reduce it. In order to reduce credit risk, constant its evaluation in accordance with lending policies and high risk deals policies, as well as other internal regulations with respect to possible cooperation with customers.

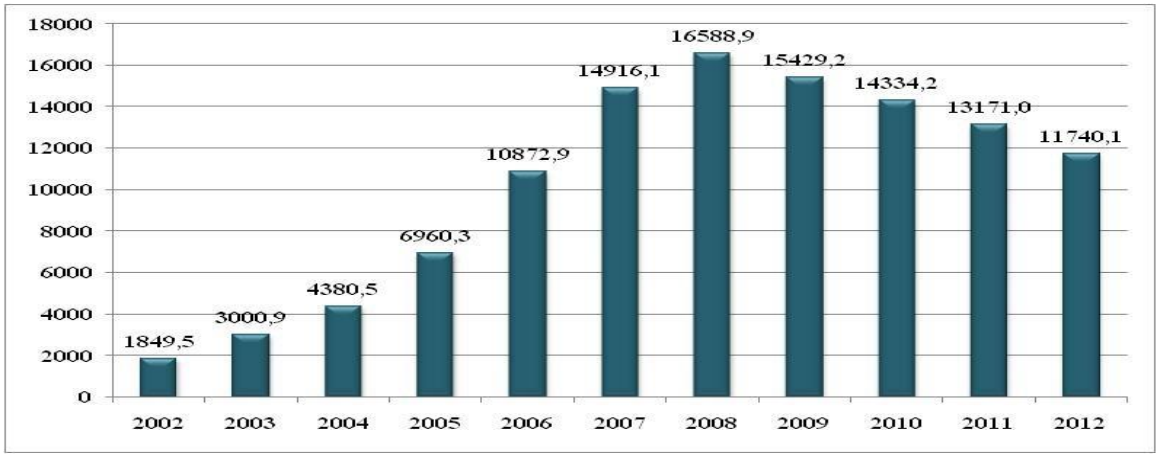

Figure 3. Loan portfolio of Latvian banks in 2002-2012, mln LVL

Source: FCMC, 2013

Stable macroeconomics have positively affected development of the local lending market in Latvia up to the beginning of crisis in 2009. As a result of positive macroeconomic development, lending conditions have also improved – interest rates reduced and lending terms extended. Foreign investment in Latvia has also positively affected development of the sector. Currently commercial banks in Latvia pursue more conservative lending strategies, as well as gradually write off bad loans, which results in decline of the value of total lending portfolio following the financial crisis.

Overall, over the last three years quality of lending portfolios of banks in Latvia has deteriorated and number of default loans have increased, which could be explained by default of borrowers as a result of worsening economic situation during and after financial crisis. However, 2012 is the best

year in terms of improvement of the quality of lending portfolio, compared to other years during and after financial crisis.

Numbers of insolvent enterprises in Europe and Latvia (45 per 10 000 enterprises) have been compared – the ratio is one of the lowest in Europe due to a large numbers of insolvencies in previous years.

Table 4

Insolvent enterprises in Europe per 10 000 enterprises

Country	2011
Luxembourg	316
Denmark	182
Austria	152
Belgium	132
France	94
Finland	94
Norway	90
Germany	84
United Kingdom	81
Sweden	68
Portugal	57
Latvia	45
Italy	26
Spain	18
Greece	5

Source: Europa statistics, 2013

Number of insolvent enterprises has increased in many countries in 2012-2013, for example Portugal, Spain, the Netherlands and Greece, where number of insolvent enterprises has increased by up to 50%, compared to only 2% increase in Latvia. As a result it could be concluded that over the last years Latvia has experienced improvement of the enterprise insolvency problem.

5. ANALYSIS OF SURVEYS OF LENDING SPECIALISTS AND BORROWERS

In the scope of the research, the authors performed surveys with lending specialists on the topics of credit risk management and possibilities for improvement of efficiency of lending, as well as with enterprise managers on the topic of evaluation of solvency and ability to service loan obligations.

A survey for lending specialists designed by author has been distributed to 38 lending specialists in commercial banks of Latvia. The aim of the survey was to determine, which creditworthiness

valuation are they familiar with and apply in practice, as well as which ratios are considered when evaluating loan requests.

Creditworthiness valuation methodologies included in the survey were chosen based on those used in practice, cited in literature and analyses in this thesis. In the scope of the survey respondents(mostly have 5 to 10 years experience in lending) had to evaluate awareness and actual use of the mentioned methodologies.

Survey results show, that in most cases cash flow analysis and credit scoring method are used (80%), as well as SWOT analysis (70%). CAMPARI and 5-C methods were familiar to 25% respondents and classic model of Altman was familiar to 75% of respondents, however these methodologies are typically not applied in practice. Cesser method, Altman Z' and Z" models, Saifulin and Kadikov method as well as Genriha and Voronova method described by authors are almost not used in Latvian commercial banks (see Table 5).

Table 5

Importance of enterprise creditworthiness evaluation methodologies for lending specialists of commercial banks in Latvia

Cash flow analysis	80%
Credit scoring	80%
SWOT analysis	70%
Rating systems	65%
Campary method	35%
5-C method	35%
PARTS system	0
PARSER method	0
E.Alman Z-model of solvency forecasting	75%
E.Alman Z'-model and Z"-model of solvency forecasting	20%
Fulmer solvency forecasting model	0
Spingate solvency forecasting model	0
Saifulin and Kadikov solvency forecasting model	0
Cesser solvency forecasting model	0
Genriha and Voronova solvency forecasting model	0
Other models	10%

Lending specialists are familiar with
Lending specialists are not familiar

Source: created by the authors

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As a result it could be concluded that lending specialists potentially can apply only half on existing creditworthiness valuation methodologies, however cash flow analysis and credit scoring methodologies are used most often, as well as less often – SWOT analysis and rating methods. Further, most important factors affecting decision of lending specialists on the loan applications were determined. All factors have been divided into four groups: financial ratios, position and reputation of borrower, business environment and management competence. Financial ratios appeared to be most vital in decision making on loan application, including:

- Enterprise profitability ratios
- Enterprise liabilities ratios
- Enterprise cash flow ratios
- Enterprise liquidity ratios
- Enterprise asset turnover ratio

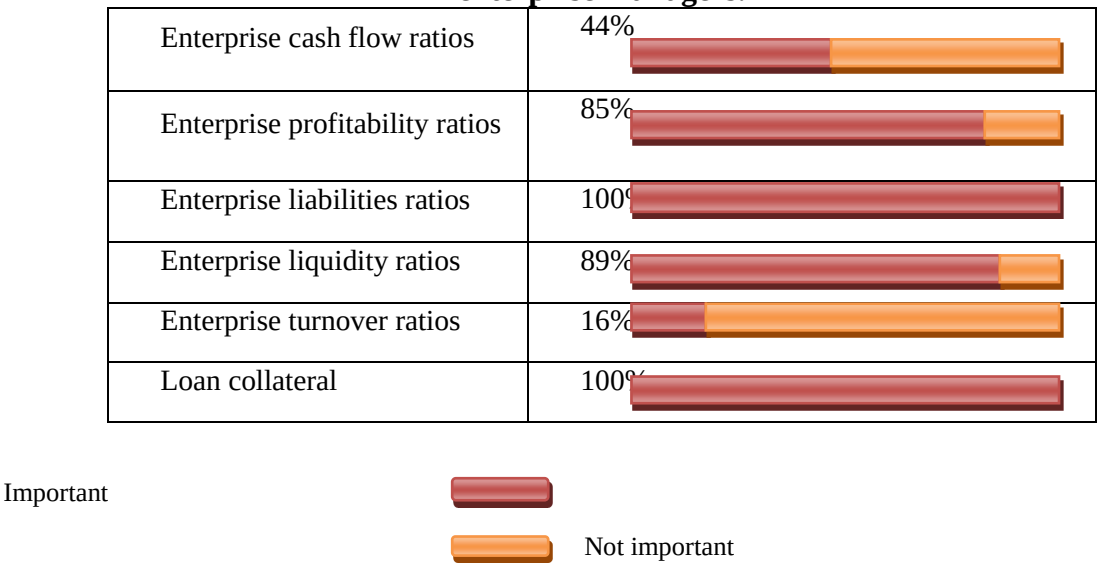
From survey results it is clear that lending specialists pay primer attention to financial stability of borrowers and quality of collateral, with less attention payable to external business environment and quality of corporate management, however formal creditworthiness evaluation methodologies are also applied instead of purely relying on personal experience and intuitive decision making.

Second survey covers 48 enterprises – managers of borrowers of commercial banks. The survey was carried out in order to investigate which financial ratios are used by managers for evaluation of financial position of their enterprises and if these ratio can illustrate solvency of the enterprises and give enough information for managers to understand creditworthiness of their enterprises.

Respondents of the survey were mostly from industrial, trade and construction sectors, their enterprises have been operating for 5 to 10 years on average and had financial liabilities, as well as these enterprises mostly did not face difficulties servicing their debt obligations (83%) and mostly conduct financial analysis on annual basis (79%). Managers consider financial ratios and collateral as main determinants of solvency (see Table 6).

Table 6

Importance of ratios affecting decision of taking on additional loan obligations for enterprise managers.



Source: created by the authors

On the other hand, position in the industry, brand awareness and competence of management are perceived as less affecting ability to take on loan obligations.

Results of the survey illustrate that majority of managers (79%) base their financial analysis on balance sheet and profit and loss statements, without considering notes to financial statements and cash flows. Managers perceive value of liabilities and liquidity as factors with largest influence on solvency, while efficiency of use of resources is perceived as less important. Profitability is also perceived as important in contrast to cash flow ratios.

In the survey on familiarity of borrowers with creditworthiness valuation methodologies, enterprise managers proved to be aware of cash flow analysis, credit scoring and rating methodologies, however they have not faced application of these methodologies in dealing with banks. Evaluation of creditworthiness was described as challenging by both lending specialists and enterprise managers. With respect to the information used for valuation of creditworthiness, both types of respondents pointer out financial statements, while both internal and external environment, as well as intangible assets are not taken into account, as well as solvency valuation techniques in general.

6. CONCLUSIONS

1. Solvency is related to the ability of the enterprise to service timely its obligations from its assets. It is the ability to maintain the operating activity of such an enterprise, which generates enough financial resources to service all its obligations. Solvency is closely related to liquidity, financial stability and creditworthiness. Both internal management and external investors and banks are interested in the evaluation of the solvency of enterprises.
2. Solvency management includes the determination of the factors affecting solvency, evaluation and the analysis of financial statements, ratios and coefficients, as well as their forecasting and management, and the development of the methods of maintenance and improvement of financial stability. Enterprise solvency is affected by external (economic and demographic changes, governmental restrictions, etc.) and internal (lack of management experience, unjustified decisions, incorrect human resource management, etc.) factors.
3. Lending policy is a set of strategic principles of loan issue, administration and control, which are aimed at management of credit risks and ensuring profitability of lending operations. Lending policy is an essential part of the strategy of a bank.
4. Credit risk is the possibility of losses or reduction of profits of commercial banks as a result of default of their borrowers or business partners. The risks faced by banks fall within three general groups: internal, operational and external risks.
5. Creditworthiness is related to the ability to repay debts and is linked to the borrower’s moral principles, competence and the field of operations, the value of real estate, the ability to earn financial resources from business activities to service liabilities. Creditworthiness evaluation cannot be done without financial analysis.
6. Lending is very important for Latvia economy and its development, regardless of the currently conservative approach to lending of Latvia commercial banks. Lending portfolios of Latvia banks are improving since the years of financial crisis. Conservative and cautious lending (financing only safe and stable borrowers) improves efficiency and profitability of Latvia commercial banks.
7. Results of the empirical research suggest that lending specialists of commercial banks in Latvia should not limit the evaluation of creditworthiness only to the analysis of the balance sheet and the profit and loss account, but pay attention to financial ratios in the cash flow statement, notes to financial statements and other financial statements, as well as the valuation of intangible assets of enterprises.
8. Lending specialists could apply the described solvency and default forecasting methodologies in order to determine timely and avoid threats of insolvency, instability and bankruptcy. The authors suggest the application of several bankruptcy identification methodologies,

based on the enterprise size and the specifics of operations, and definitely applying models based on logarithmic regressions. Genriha/Voronova and Saifulin/Kadikov models could be suggested for evaluation of solvency of Latvian enterprises.

9. Commercial banks could improve the evaluation of creditworthiness and perform systematic complex analysis for objective and complete evaluation of the financial position of enterprises, including the application of the methodology, suggested by the authors. In the scope of complex analysis, special attention could be paid to the analysis of all aspects of the enterprise operations and the determination of solvency affecting factors.

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THE INTERNET CHALLENGE AND THE INCUMBENT EDUCATION SYSTEM – CASE FINLAND

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Abstract

The classroom has been core to education and teaching for the last five hundred years. From this respect also education has remained unchanged. The Internet has huge potential to change this. The Internet changes establishments and structures, which have been an integral part of our society. The internet will also change education.

This paper identifies some of the forces driving internet enabled education and builds a framework which should make the strategic challenge brought on by the internet identifiable to all incumbent educational systems.

Education is a core institution of our society. Changing the classroom inevitably means changing the way our society and our educational systems are structured. Many of the players in the educational system are embedded in its constructs. This paper argues that change is inevitable. Incumbent educational institutions should identify these challenges and create a strategy of experimentation to understand the potential of internet enabled education.

This paper also argues, building on experiences in Finland, that a national education system will be challenged by the Internet and national education systems will have to consider redesigning the system.

The paper will also suggest approaches present incumbent educational institutions can adopt within the constraints of their present educational system.

The paper builds on some earlier practical experimentation within the online education environment, which has been possible in the existing university environment. This earlier experimentation has been based on a theoretical understanding.

Key words: Education, Internet, disruptive, System competition, Strategy

1. INTRODUCTION

The classroom has been core to education and teaching for the last five hundred years. From this respect also education has remained unchanged. The Internet has huge potential to change this. The Internet changes establishments and structures, which have been an integral part of our society. The printing press made possible the publishing of books and newspapers. Today the media industry including newspapers is undergoing change because books and articles can be published on the internet. The Post Office, an institution more than 350 years old is undergoing change, because the mailman's bag is getting thinner by the day. This is because bills are sent as ebills, newspapers are increasingly read online and communication between people is on Facebook, Twitter, emails etc. It is hence, from the perspective of technological change, inevitable that education, as embodied in the traditional classroom, will also change. The real question is will society embrace the potential to change or will society be confronted by the forces of technology change?

Education is a core institution of our society. Changing the classroom inevitably means changing the way our society and our educational system is structured. Many of the players in the educational system are embedded in its constructs. An individual can´t change, if the school around it does not change. A school can´t change if society around it does not change. Yet change is happening and the relevant question is how to drive this change as an individual, a school or society.

This paper discusses some of the challenges of online education as seen in the context of a university of applied sciences in Finland. Education in Finland is free to the students and the universities of applied sciences are structured under regional government. In practices universities of applied sciences are owned by the local municipalities although financed to a great extent by the state.

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This paper is not a research paper in the sense that it does not follow the established research process of identifying a research question, identifying the relevant theories, using research design and methods to collect and analyse data to answer the identified research question. It is surprisingly often the case that data is not available or even non accessible. In these cases one has to build the case through theoretical argumentation and then leave the floor open to whether or not access and resources to collect data will be possible in future studies. In this respect this paper can be regarded as a pre-study which suggests further lines of enquiry.

The paper however does build on some earlier practical experimentation within the online education environment (Saarikoski), which has been possible in the existing university environment. This earlier experimentation has been based on a theoretical understanding. This paper builds on the theoretical understanding to identify areas in which practical experimentation has not been possible or has been constrained and limited because of the present structure of the education environment in Finland. It hence suggests some areas in which the structure and policy of the Finnish University environment should perhaps be discussed, studied further and changed. The force driving this change is the Internet.

This paper is more of a development process in which the market is studied through experimentation and observation. The goal has been to create pilot online courses, to learn from this process and to elaborate on further steps of development. The experiments are guided by theoretical understanding and the results and observations of experiments are reflected against theory.

2. IDENTIFYING INTERNET DRIVEN CHANGE IN THE EDUCATION ENVIRONMENT

Driving technological Change

Technology has always has been a great driver of change. Clayton Christensen's innovators dilemma (1996) is a beautiful tool with which to identify new emerging markets. Christensen refers to these markets as disruptive and argues that technology related markets are surprisingly often built around one single key value attribute. Many customers are locked-into this key attribute and want their technology providers to become better and perform better along the established value trajectory. The traditional value trajectory in schools has been classroom teaching.

The innovators dilemma suggests that new emerging technology companies should not work with established value attributes. They should not listen to established customers, but should work and find new possible value attributes. Very often technological performance along these new value attributes is relatively poor, if measured with the established attribute, and the challenge is to find customers that are willing to migrate to a new attribute despite the fact that they will receive poorer service, if measured with the old attribute. These new emerging markets are quite often small and hence of no major interest to established market players. In the book Innovators Guide to Growth (Anthony et al p 155-157) introduce the Disruot-o-Meter a tool with which to measure the disruptive potential of a new emerging idea. By looking at and answering the questions on the disrupt-o-meter one could evaluate the disruptive potential of online education and compare it with the incumbent classroom teaching. I leave this to the reader to evaluate.

Applying the innovators dilemma in the university environment has meant that instead of providing better education (along the present value trajectory) one should focus on experimenting with "poorer" education along a new value trajectory. Teaching in a virtual environment as compared with teaching in a traditional classroom environment was in its early stages "poorer education", because of difficulties with technology and also because of inexperience and lack of skills in teaching in the virtual environment. A lot of experimentation has been done with both technology and students in the virtual environment.

The current status at the Laurea University of Apllied Sciences (one of the universities of applied sciences in Finland) is that a complete business administration bachelor degree can be studied virtually. Also a new market has been found which was clearly indicated by the fact that over 15 students were applying for each open student position. Students (customers) are adults, who have

not completed a university degree and who are in their mid-thirties and forties i.e. living their "rush years" where time is constrained both by family and their jobs. This "customer segment" values the new attributes of virtual education (independence of place and time) and they were clearly willing to experiment with new technologies and to bear with the possible frustration related to limitations of both early stage technology and inexperience of teaching in the new environment. This experimentation with virtual curriculum clearly identified a new emerging technology enabled value attribute (independence of place and time) and a market which could be built around this new attribute. A new company working in the market having identified a situation in which only one out of 15 customers requesting for its services is served, would immediately ramp up operations to serve the needs of the market. The Finnish universities are publically financed, policy drive, not market driven and hence no major efforts were made to ramp up operations and meet an identified customer need.

Platforms as drivers of change

E-learning platforms are a driver of change. In Finland a lot of work has been done with online education and in building online e-learning platforms. E-learning platforms have become the norm and are part of the IT-based operations management systems of nearly all Finnish Universities. There is a huge variation, however, on how these e-learning platforms are used. Some teachers use the platforms as a storage device for classroom material, others have experimented and the class has migrated from the traditional physical classroom to become an online virtual class. Experimentation with e-learning platforms and virtual classrooms will no doubt continue vigorously. A market for e-learning platforms and other related IT solutions has emerged and the size of this market could be studied by looking at how the ratio of it based tools and services within the total cost structure of a university has changed in the last few years. The emergence of e-learning platforms and the possibility to migrate from physical classroom to virtual class environments has thus far not really impacted the way universities are organised. The Finnish universities of applied sciences for example have remained organised around local municipalities.

The Internet

The Internet is perhaps one of the greatest drivers of change. Despite this very apparent fact it seems that the potential impact of the Internet has been underestimated. Europe, Finland included, has a strong emphasise on the digital revolution and does not really make a distinction between the digital revolution and the Internet. The internet is digital and builds on digital communication abilities, but the Internet can also be viewed as a huge information network. This in turn leads to studying and understanding how value is created, captured (and delivered) in networked environments and how to create and capture value with information based goods and services. This in turn leads into studying the business models of Internet based or brick and click based companies. The business model canvas developed by Osterwalder and Prigneur has proven to be an invaluable tool in analysing and crafting new business models. The Finnish universities are state financed and no privately financed universities exist in Finland. Business models in the university context of Finland are not an issue or a topic of discussion perhaps more of a taboo. This should change.

Markets vs public sector governance

Markets and the forces of creative destruction (Schumpeter) shape and build new markets and drive change. In the classical definition of what is a market, market parties engage in a market in

exchange with each other for goods or services. Sellers receive money in exchange for the service or goods[8].

In Finland educational institutions receive money from the government in return for providing education to the students. In Finland education is free to the student. Education providers do not receive money from the students in exchange for their teaching service, there are no term fees, although sometimes they are brought up in political discussion, i.e. education in Finland is not a market. Education is financed through the collection of taxes. In practice, education is a state monopoly and only the state can authorise institutions (e.g. universities) to issue certificates and give degrees (e.g. a bachelor's degree or a master's degree).

In welfare states like Finland education is financed through taxes and has been traditionally provided for free by the government. Education is part of the public sector. Today the Internet enables countries like the US, in which education is financed through semester fees and in which the educational system operates to some extent under market principles also to offer free online and also global education. The public governed (e.g. Finland) and market systems (e.g. US) are clashing. There is a need to understand how and why a market operated system can provide free education and to what extent this Internet enabled free education will challenge and change the publicly financed education system.

In Finland education is seen as a means to ensure the competitive strength of the nation. For this reason education is free and for this reason the state also ventures out beyond the traditional area of academic education (i.e. bachelor, master and PhD) to support and subsidies education in e.g. cases of transformational industrial change or to support educational needs in transforming adult labour markets. This brings up the question what are the limits of state financed education i.e. what should the state not finance and should the state also act in a way which allows for an educational market to emerge? Traditionally this type of thinking has not emerged in Finland and has to some degree been a taboo in Finland. However global institutions are providing free online education on the Internet as part of their business model. People living in Finland have access to this material as well as other material freely available on the Internet. The material is to some extent also used by university teachers throughout Finland. The access to online video courses will inevitably have an impact on the role of the teacher. To emphasise the point in a populist way, will the future teacher be a creator and sharer of information and hence a creator of new value or will the role of the university teacher transform into a collector of appropriate Internet video links or will the future teacher act a guide to knowledge?

Finland is a small and peripheral market in which education is a government monopoly. However some foreign universities and schools have shown an interest in entering the Finnish market. The government holds the certification right. Market entrants to the Finnish education market can and have attempted to circumnavigate this particular market entry barrier. For example the Estonian universities are offering university degrees, which have been certified by the Estonian government[9]. They approach those Finnish students who have not been able to secure a study place at a Finnish university and offer them for a price (annual tuition fee) the possibility to study in an Estonian university without the need to migrate to Estonia i.e. the Estonian university has established a subsidiary in Finland . Another example is the Helsinki School of Business (Helbus), which is a private educational facility, also focusing on students who have not been able to secure a student position. Helbus (www.helbus.fi) offers tuition for a fee. It can´t offer a certificate i.e. university degree, because the Finnish authorities would probably not authorize them, but argues that after a two year study, students can apply for online bachelor level certificate courses provided

[8] A good description of how to define a market can be found at http://en.wikipedia.org/wiki/Market

[9] http://www.talouselama.fi/uutiset/viron+korkeakoulut+joukolla+suomeen++maksullista+korkeakoulutusta+suomalaisille+pudokkaille/a2137438

by their foreign partner institutions. Also in this later example the students have the possibility, without leaving Finland, for a certificate provided by authorities from other countries. In this respect one can argue that the Finnish educational market is gradually facing pressure from foreign education institutes and this will create pressure to open up the Finnish educational market for competition.

One of the goals of the Finnish government is to promote the export of education[10]. The underlying argument is that because of success with the Pisa competition, Finnish education is in high demand and highly valued. Interestingly Henna Virkkunen, the minister of Public Administration and Local Government (2013) pointed out that Finnish legislation presently prohibits offering certificates e.g. Master or Bachelor Degrees outside of Finland (Opettaja-lehti 11/2013 p 27) and that this is a major obstacle preventing the export of education. However, it is feared that changing the current laws and allowing exports of certificates would also open up the question of tuition fees for foreign students studying in Finland. As a member of the European Union, Finland can't have a different price for EU students and Finnish students studying within Finland and hence the question of being able to sell degrees outside of Finland would also bring up the issue of domestic tuition fees for Finns studying within Finland. This opinion has also been voiced by Aulis Pitkälä[11] the head of the Finnish National Board of Education. It therefore seems that free tuition in Finland is also an obstacle preventing the export of education.

Online education is clearly providing a tool for market entrants to circumnavigate the restriction of certification. The certificate i.e. the right to issue a university degree, is presently both seen as a barrier to entry by those who are trying to enter the Finnish market and as a barrier to exporting by those who are trying to move outside of the Finnish market.

Customer

One of the great drivers of change particular to the Internet environment is the user i.e. the customer. Charlene Li and Jo Bernoff (2008) discuss this phenomenon in their book Groundswell and they define Groundswell as a phenomenon in which users interact with each other to complete the tasks they need to do and tasks which were earlier performed by institutions. This phenomenon is exemplified by how the emerging internet generation, which Tapscott (2009) refers to as internet natives, instead of asking their teacher, go to Google or even to YouTube to see how a task should and can be accomplished. The power to transform education lies in the hands of the students. They will challenge their teachers and their educational institutions by migrating to an increasing degree on to the Internet. Thus far, only the occasional student, every now and then, will bring up in a discussion that he or she has participated in e.g. online courses provided by e.g. MIT open course ware, Coursera or Khan Academy. There are no official statistics available on how many students resident in Finland or how many Finns (not necessarily only students) have participated in open and free Internet (online) courses provided by foreign universities. The number is on the increase. The future existence of universities and teachers will depend to a high degree on their ability to develop an internet presence and an internet strategy.

Conclusion

Technology, e-learning platforms, the Internet, market vs public sector governance and customers are forces that drive the change of education.

Technology is allowing for the creation of new types of elearning platforms. These platforms are known as MOOCs (massive online open courses). They work over the internet and they embrace

[10] http://www.minedu.fi/OPM/Koulutus/artikkelit/koulutusvienti/index.html
[11] http://www.youtube.com/watch?v=49AVNSlOPag

the properties of the internet allowing for scalability, massive participation and collaboration, openness, scalability and independence of time and place.

Countries like Finland, which have a public and free education system (governance model) will be faced by competition coming from market oriented educational systems (like the US). In practice market based universities are using technology to provide online courses for free and are building their business models around this online offering.

The customer will make the final choice. Many customers will be motivated to join and participate in online education provided for free by the best universities in the world and will be questioning why courses completed in the best universities are not accepted by national universities and can´t be included in the national degree certificate. The role of national education monopoly will be questioned by the users.

The PESTEL framework consists of Political drivers, Economic drivers, Social drivers, Technological drivers, Ecological and Legal drivers. In the above discussion, the Internet, e-learning platforms and disruptive innovations can be seen as representing the T in the Pestel framework.

The customer and to some extent also the internet represents social change – the S in Pestel.

The Finnish educational system is a political structure embedded in the local law and hence represents the P and L of the Pestel framework. Interestingly the market based US educational system is also represented by the P and L of the Pestel framework.

The E representing economic factors has not been discussed in the above discussion. The publically financed education system in Finland is facing economic pressure because of the public sector deficit. The market operated system (e.g. in the US) is under pressure because of increasing tuition fees. The fact however remains that only the market operated education system has been able to provide Internet based free online education. In Finland open online education is not free for those who are not students.

The Pestel framework is a tool used in the development of strategies in environments of great change i.e. in environments of political, economic, social, technological, ecological and legal change. Another tool for strategy development in fast moving environments is the building of scenarios. A conclusion of the above discussion is, that the PESTEL framework should be used and scenarios should be built on how Internet based education could be embraced and promoted in Finland.

Another conclusion is that the Finnish Universities have not been able to meet the challenges and benefit from the opportunities of the internet. One could argue that the Finnish universities are misaligned to meet the challenges of the Internet and have not been able to truly embrace Internet based education. The challenge is to identify the depth of this misalignment, to build frameworks and scenarios to understand the Internet challenge to a publically financed education system and to suggest how an Internet based education system could be built into the Finnish context and also what steps could be taken within the constraints of the present environment.

3. UNDERSTANDING THE STRATEGIES OF EMERGING INTERNET BASED EDUCATION PROVIDERS

The following chapter describes a framework to help understand the possibilities of Internet based education. A lot of focus has been on the teacher and student level i.e. how to teach and learn online. Also a lot of effort has been put into how to build e-learning platforms i.e. the institution and school level. Less focus has been on the education system level and in comparing education systems to each other (benchmarking). A major reason for this lack of education system analysis and comparison is that thus far education systems have really not competed with each other. The Finnish education system has been available in Finland and no other system has been available in Finland. This is now changing. In practice Finnish students through the Internet have access not only to online teaching and to different e-learning platforms, but also to other types of educational

systems. We have reached the era in which education systems are competing with each other. The question really is, which system will be the winner? Or how the clash of systems will be played out?

This framework focuses on the system level. When building information based services it is important to build platforms and ecosystems. In information based industries competition is played out on the platform (system) level. Education systems can be analysed by comparing them to how platforms and ecosystems emerge around information based goods and services.

The proposed framework (Figure 1) has two axes. The horizontal axis looks at to what extent the education system (education platform) is local and to what extent the system/platform is global. The vertical axis looks at to what extent the education system is open and to what extent it is closed. Laudon and Traver (2013 p 53) describe eight unique features of the e-commerce. These features are (ubiquity, global reach, universal standards, richness, interactivity, information density, personalization and customisation, social technology). When building a business model for a university, the university could be simplified to be an e-commerce operator selling courses. This is a simplification and there are several arguments with which to disagree with this simplification, but at the end of the day students are core to a university and one of their core acts is to participate in courses. The eight unique features of the Internet have been simplified in figure one to the axis of local and global.

Henry Chesbrough (2003) has done a lot of work with open innovation. The opposite of open is closed and this has been drawn on the vertical axis. This is how the drawing in figure one was born,

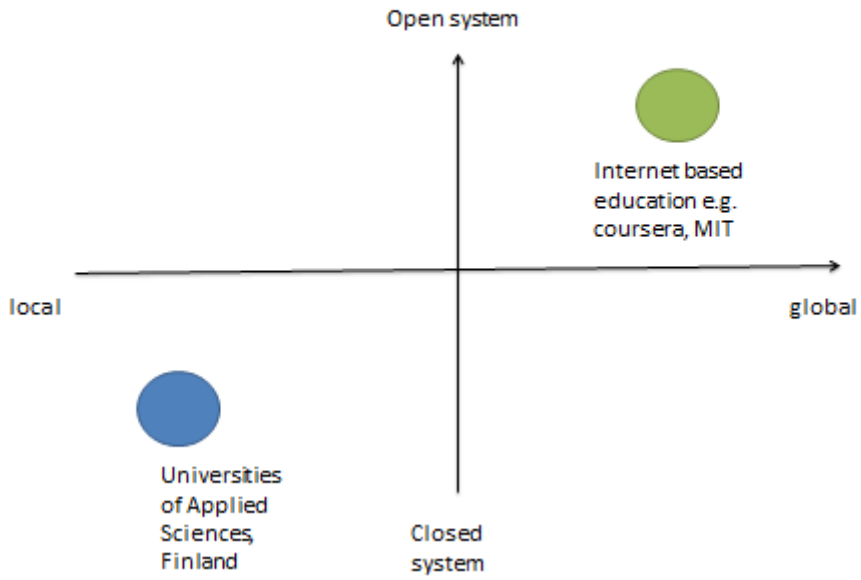

Figure 1. The strategic position of a University in the Internet era.

Finnish universities of applied sciences are operated or owned by the local municipalities. It is also stated in the Finnish law that a key task of the universities of applied sciences is to support the local community and local enterprises. Measured with these two criteria (ownership and law) the Finnish universities of applied sciences are local.

An Internet based education system would build on the strengths of the Internet and would be encouraged to look for scalability from the very early stage. For this reason an Internet education provider would search for a global market. From the perspective of a student Internet education is available anywhere and is thus global, where as traditional education is limited by the physical location. Measured by these two perspectives 1) how the student perceives internet based education

and 2) the strategic need for scalability in Internet businesses, internet based education would arguably have a strong global approach.

The second dimension open or closed, is more interesting. Education in Finland is free and this is often regarded to be the same as open. However in Finland we also have an open education system, which means that a student, who has not successfully passed the university exam, might participate in individual courses. For these courses the "open university" student has to pay a fee. The price of these courses is strongly subsidised by the state. The key learning here is that one should not regard open to be the synonym for free and closed to be the synonym for tuition based.

Openness in university education could perhaps refer to a system in which there are no university entrance exams in other words anyone is free to enter, there are no thresholds. In some countries the degree achieved in college exams determines the universities one might enter, without a separate entrance exam. In countries like Finland most of the new students, with some minor exceptions, need to attend and pass a separate university entrance exam. The need to pass a separate entrance exam is a barrier limiting university entrance. In practice and on a very general level, because of the limitations of physical space, incumbent universities are and have been relatively closed. Education on the Internet is also perceived to be open, because anyone with an internet connection can participate. Thus internet education when compared with traditional education is more open.

Baring in mind that today a student can choose between traditional education or internet based education, the question really is how should incumbent universities react to the threat of these emerging internet enabled new market entrants. Since the incumbent universities are products of the existing education systems one can also search for barriers which limit and prevent incumbent universities from migrating toward an internet based strategy.

Education is an information based service. One of the characteristics of information based goods and services (Shapiro Varian 1999) is that they are costly to produce and cheap to reproduce. In the context of education this means for example that, it is expensive to create new information and e.g. a new course, but it is cheap to video the course and put it online for everybody to see. The cost of designing a course is referred to as a sunk cost i.e. it might have taken you hundreds of hours to learn your discipline and to create a course around it, but nobody will pay you for the time you have spent. The costs have to be recovered from the market. Shapiro & Varian suggest several strategies on how to recover the costs of information based services. One of the key teachings is differentiation and pricing based on the value to the user. Internet based education providers will be following this strategy.

Finding customers has always been the task of marketing. One of the traditional ways to market goods has been to give prospective customers free samples. Traditional physical goods have a unit cost and thus the amount and recipients of free samples will be limited. One of the surprising outcomes from the fact that information is costly to produce and in particular cheap to reproduce, with practically no marginal price, is that free samples can be given to anybody and everybody. Free internet education can be seen as a marketing strategy in which free samples are given to everybody.

Institutions providing internet based education have to somehow finance their operations. Institutions and start-ups focusing on internet based education are looking into the scalability of education i.e. building a huge customer (student) base on free courses and then focusing on how to convert these free students into paying customers. To do this they are not limiting the availability of their open courses, but they will be looking for how to convert non-paying students into paying customers.

To convert customers from free customers into paying customers one has to be able to provide additional value to the paying customers. Many internet based companies find value in the community and internet education companies will be following the same strategy. New customers will learn how to use the e-learning platforms. This will create a lock-in i.e. customers have spent time and effort in learning their way around the platform and will perceive it as a switching cost when considering the adoption of other platforms.

Incumbent education institutions will be facing competition from the emerging internet based education providers. The key value proposition of incumbent institutions in Finland is that they are allowed to provide a degree. When viewed from the perspective of information markets the government in Finland is using "bundling" to create a market monopoly. The government retains the sole right to authorise the degree of a university. These degrees have to be free and hence a problem has emerged in the Finnish market, because educational institutions can't sell degrees and can't export degrees. The student tuition is paid by the government and hence the incumbent institutions have not been in a position where value to student is measured by willingness to pay. Even open education in Finland is subsidised and hence the ability to measure the student value creation process through the willingness to pay remains poor in Finland.

The conclusion of the discussion of this chapter is, first of all, that there is a relatively clear strategy that internet based education providers might be following and experimenting with. Second, it is also relatively clear, that students have access to internet based education and thus the internet based market oriented system is currently clashing in the market with the incumbent system and the incumbent system has to consider its options when confronted with the internet challenge. Third and this is a major concern, it seems once again relatively clear, that there are many structural constraints within the incumbent system, which basically limit the extent to which incumbent education providers can and will be motivated to experiment with internet based education.

4. POSSIBLE FUTURE STEPS WITHIN THE PRESENT INCUMBENT ENVIRONMENT

The key question is what should present incumbent educational institutions do when faced with the challenges of emerging online open education providers (the challenge of figure 1).

The first step those in charge of the national education system should take is to build a strategy of how to compete with these new emerging challengers. This strategy should take into account the business model of the competitor i.e. how tuition based (e.g. US) universities are competing with free against a free public education offering In Finland. This, I believe means that also universities in Finland should have a business model and that a debate on tuition fees will also emerge in Finland.

Incumbent education providers are part of the national education system and thus their ability to make choices is constrained by the structure of the system. Despite this systemic constraint, incumbent education providers should at least experiment with online opportunities, contemplate a strategy taking into account the threats and opportunities of open online education and lobby for change.

There are steps which can be taken by individual teachers within the constraints of present structures. In this respect the individual teacher can prepare him or herself to adopting online education. Here are some recommendations:

1) Teaching online and continuous experimentation with virtual courses. Teachers should continue to develop, experiment with and share experiences of online courses. Teachers should at the same time be more aware of how they are possibly limited by e.g. organisational constraints i.e. is teaching possible only within a limited organisation focusing on a geographic area even though students are no longer limited by distance or time.

2) Experimenting with sharing material. Teachers should experiment and share their material on online sites like YouTube and slideshare and learn how value can be created and captured through open sharing. Teachers should search for their colleagues which are already sharing material and learn from them, why they are experimenting with sharing. In the future we will possibly see specialization in which some teachers will focus on the creation of material and other teachers will become collectors and build their courses around material produced by others.

3) Creating a virtual degree. Individual courses can be connected to build a virtual degree. A complete degree will enable to test the market to see, if there is demand for online education and in particular what the value in online education for the student is and to what extent the course can be completely online and to what extent physical meetings are needed to ensure efficiency of the degree.

4) Building massive online courses. A bachelor's degree in business administration contains more or less the same content and is not dependant on where one studies. Teaching is conducted in several locations, which easily leads into a situation in which the content of the course varies from location to location. A practical step could be to create a project with members from different campuses with the task to create a common online course on e.g. entrepreneurship with shared material, shared tasks and shared syllabus.

5) Co-operation with other universities to create shared online material. Currently universities are collaborating with each other to create joint programmes. For example students from six different countries meet for a one or two week session to participate in a joint entrepreneurship programme. Teachers could shift part of these programmes online by having a shared online learning environment and by having teachers from different countries develop material (slides and videos).

6) Encourage and allow students to take open online courses. An efficient and perhaps the best way to learn about open online courses is to encourage students to participate in these courses and to give them credit for their participation. In this way a degree completed by a student in Finland could contain one or two courses completed in an open online environment and provided by foreign universities.

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